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DISTRIBUTIVE UNITY AS A "CATEGORY", AND THE KANTIAN DOCTRINE OF CATEGORIES.¹

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Knowing and Being.

IF knowledge is taken in the strict sense, in distinction from search, inquiry and mere belief, the question how being can be known does not arise at all. In this sense to ask how knowledge is possible is like asking how being is possible. Being and Knowing are ultimate facts which must be accepted at their face value. Knowledge is being itself being known, or, as Alexander would say, being "revealed". The real question is not—How can we know at all? It is rather—How is it that we do not know everything? What needs to be explained is not knowledge but ignorance, and the passage from ignorance to knowledge through belief and error and the correction of error.

There can be only one answer to the question why our knowledge is limited. Our knowledge is limited because our existence is limited. We are only very small parts of the immense whole of being. In particular, it is only a very small part of the whole which enters our immediate experience. But this solution of the problem may easily be conceived in such a way as to fly in the face of the obvious facts and plunge us into insuperable difficulties. It may be taken to mean that owing to our finitude we can only know certain

¹ This article appears to have been originally composed as part of a correspondence with Professor N. Kemp Smith, in connexion with the latter's articles on *Universals* (*Mind*, N.S., Vol. XXXVI). It has been prepared for publication by Professor A. K. Stout and the editor. Its publication was certainly contemplated, but it should be remembered that it has not been subjected to the careful final revision which was G. F. Stout's general custom.

parts of the whole in isolation from the rest—those parts which we immediately experience or which are otherwise immediately connected with our own finite existence. But our knowledge is never of this kind. We never know parts of being in detachment from the rest and from each other, as we might be supposed to do if they did or could exist by themselves. We cannot draw a line round any specific item or collection of items within the range of our knowledge and say that in knowing this we know of nothing beyond it. We cannot apprehend distinct existences without apprehending them as connected with each other within a whole which transcends and includes them.

As knowledge is the direct revelation of what is known, this can only mean that the multiplicity of distinguishable existences does really fall within the unity of a whole such that everything is essentially incomplete without its context within the whole. This whole is what we call the universe of Being. The development of knowledge in the individual mind is the progressive revelation of the universe at once and inseparably in its unity and in its detail. Further, the unity of the universe, as thus revealed, has certain distinguishable aspects which are for us ultimate. The fundamental forms of unity, which themselves have their being only within the unity of the whole, are what we call Categories.

Synthetic Activity.

I have spoken of the development of knowledge as the gradual revelation of the universe in its unity and its detail. But such language would be very misleading if it were taken to mean that the individual is passive in the process. Throughout the development, subjective activity, following the lines of subjective interest, is essential at every step. It is only through our own cooperation that the universe reveals itself to us. Every specific object, being essentially incomplete, is a starting point of potential questions. But if they are to be actual questions they must be asked by someone interested in getting an answer. This formula covers the behaviour of

the terrier smelling its first rat and also that of Einstein seeking a formula for gravitation. In its most primitive and in its most advanced stage, knowledge develops through active inquiry and experimenting. The impelling motives are initially practical rather than theoretical, and to the end practical motives remain predominant. At present I am trying to find an answer to the question: What is generality? My motive is mainly theoretical curiosity. For Thorndike's cat imprisoned in its cage, the question is how to escape and is wholly practical. But in its experimental efforts to escape it progressively increases its knowledge of the conditions in which it is placed.

The only activity conditioning knowledge is that which I have described. A question is essentially incomplete, and is only completed in its answer, and the inquiry or seeking whereby it passes, however gradually and tentatively, to or towards this completion is the subjective activity through which knowledge advances, and through which also error is possible.

A category, from this point of view, is an ultimate type of question. The various fundamental ways in which objects may be apprehended as essentially incomplete correspond to the various aspects of the universe. Inasmuch as the answer is not known when the question is asked, the process of finding even a partial answer is always synthetic. It leads to new knowledge or belief. Here, however, it is important to make a distinction. Some questions in a sense supply what is required for their own answer. Given certain terms related in certain ways, within the complex unity of a system, the problem is to find further relations between them within this system, and for its solution no data are required beyond a knowledge of the general nature of the system, together with the given relations of the given terms. No knowledge is required except a knowledge of what is implied in asking the question at all. In working out a chess problem, for instance, we need only to know, besides the given position, the possible moves in chess and the rules of the game. What we have to

discover is which of the possible moves in this possible order will, in accordance with the rules, yield a mate in two. This we do by trying selected series of moves until the end is attained, or appears to us to be attained. Throughout, it is the special nature of the question itself which predetermines what is required for an answer or for a possible or probable answer. It is also the question itself which in the process of inquiry determines what is comparatively relevant or irrelevant. It determines whether we are "hot" or "cold" in the game of hide and seek. Synthetic activity of this sort may be called deductive because it is peculiarly characteristic of the deductive sciences. As we are not especially concerned with it here I shall not discuss it further. I must, however, add that in my view the knowledge which it presupposes, though, like all knowledge, it transcends experience, yet, like all knowledge, has its original source in experience.

None the less it has to be distinguished from another kind of synthetic activity which may be distinctively called empirical or inductive. In deductive synthesis the passage from question to answer requires no knowledge of particular facts except such as are already presupposed in the question itself. In inductive synthesis further facts are needed which can only be discovered by an appeal to experience—by observation and experiment. It is in this way, for example, that we originally proceed towards the discovery of special causal relations and causal rules; and the same is true of all questions concerning factual relations as distinguished from relations of possibilities (what Hume called "relations of ideas"). The absurdity of the question "If you had a sister would she like cheese?" is that it concerns a relation of possibilities and that it could be answered only by deductive synthesis for which there is no basis.

Though these two kinds of synthesis are distinct, yet in the actual development of knowledge they are constantly intermingled and supplement each other. Further, though the one does and the other does not require fresh empirical

data to bridge the transition from question to answer, they are otherwise essentially akin. In both it is the nature of the question which determines what we come upon in the process of seeking or inquiring what is, may be, or is likely to be the required answer or part of it. It is the nature of the question which determines what is relevant to it and whether we are on a comparatively hot or cold scent. In principle it makes no difference in this respect whether we have to deal with new empirical data or not. According as the question is more or less specific and definite, it pre-determines its own answer in a more or less specific or definite way; and the question itself becomes progressively more specific and definite through the progress of the synthetic activity of seeking its answer.

The Kantian Conception of Synthesis.

Synthetic activity as thus conceived differs vitally from the Kantian. It is, indeed, essential to the development of knowledge in finite individuals, and it alone enables us to understand how in spite of their finite limitations they can none the less know the universe of which they are parts. But this is a miserably inadequate account of what Kant calls synthesis. For him, in the full development of his doctrine, synthetic activity is not merely the way in which alone knowledge can develop in finite individuals. It is rather a process through which knowable being is in the first instance constituted for finite subjects. Knowable being is thus contrasted as "phenomenal" with a background of unknowable being, the region of "things in themselves". From this it follows inevitably that synthetic activity, though it may be continued into our conscious life, is primarily a preconscious and timeless process belonging to the domain of the unknowable. Thus pure schematism is for Kant a mystery hidden in the depths of the soul. Logically, as Kemp Smith has shown, he cannot rest even at this point. He ought, in the end, to say that synthesis is a preconscious process generating at once the individual knower and his phenomenal objects.

Why does he suppose that such a process is required? And what must be its nature in order to supply what is required of it? It is required, he supposes, because all knowable being has two aspects which do not by themselves account for their connexion with each other. Every knowable object is at once a unity and a multiplicity. The multiplicity seems to be given in or through immediate experience, with its space and time forms. But the unity cannot be so accounted for, because it always transcends the content of our private experience. It does not merely connect given items in given relations. It connects them according to universal principles in relations which are not given and also with items which may not be given, though they may be sought. When this is realised we can also see that even the multiplicity which is thus unified cannot consist merely in the content of immediate experience. For what we immediately experience consists in a particular series of occurrences which, taken by themselves, cannot be connected with each other according to universal principles. Taken by themselves they have not the unity essential to an object of knowledge. What has to be accounted for is therefore not only objective unity; in accounting for this we must also at the same time account for objective multiplicity, in so far as this cannot be simply identified with the content of sense experience—the series of representations "in us". And yet we must bear in mind that our knowledge of the multiplicity in some way depends on sense experience, just as our knowledge of the unity depends on thought as distinguished from sense. The problem is complicated. But Kant's ultimate solution, as Kemp Smith has shown more clearly than anyone else, is expressed in the word "synthesis". Synthesis is a timeless preconscious activity whereby, on the one hand, the knowable object is generated as a unified manifold, and on the other, the cognitive subject is generated as intellectual and sensible. It is thus a process whereby unity and multiplicity are supposed to be originally brought together in a product. And just as the product is twofold, involving in essential correla-

tion knowing subject and knowable object (phenomenon), so the general process is conceived as implying two factors—the pre-objective factor and the pre-subjective factor.

Kant here seems to be attempting to answer a question which cannot be intelligibly answered because it cannot intelligibly be asked. There neither is nor can be any relation of unity and multiplicity. There is no union of unity and multiplicity except the unified multiplicity itself. The primary fact is the *whole* and relations can only subsist between distinguished members of the whole. All this has been admirably said, though with much playful detail parodying Eleatic dialectic, in the second part of the *Parmenides*.

Even if we set aside general considerations of this sort and admit that the Kantian conception of preconscious synthesis is in itself possible, it must still be maintained that, for Kant's purpose, it is futile. It does not solve the original problem with which he started. This problem is fundamentally that of Hume—How can we know matter of fact which does not fall within our immediate experience? Let us suppose a synthetic process generating at once phenomenal objects and knowing individuals. The phenomenal object, whether it is so generated or not, still transcends immediate experience. It is other than our sensations of "outer and inner sense". Thus the original difficulty, if it be a difficulty, recurs. If, owing to the synthetic process, the objective phenomenon was itself immediately experienced, the original difficulty would not have existed at all and would not require to be removed. There would have been no problem to solve. Similarly, the problem itself disappears, if we say that the phenomenal object is not indeed immediately experienced, but immediately known through experience. Once granted that we can immediately know what we do not immediately experience, the original question is no longer a question, and it is therefore futile to attempt to answer it by obscure hypotheses concerning secret processes which may take place in the depth of the human soul or in the still deeper depths of noumenal reality in general. What remains to be considered is the way

in which knowledge, as the immediate revelation of being, is conditioned in its development in finite individuals through the limitation of their experience and subjective interest, so as to shade off into inquiry, opinion and error.

The A Priori.

If we reject Kant's view of synthesis, we must also reject his view of the *a priori* as a factor in synthesis and more especially in *empirical* synthesis. We must refuse to treat the *a priori* as a formal and in itself an empty principle of unity whereby what would be otherwise a disjointed manifold is constituted into a unified complex of interrelated parts. Instead of this we have to start from the conception of synthetic activity as it is found in the process of inquiry or seeking. In all inquiring or seeking there must be some prenotation of what it is we inquire after or seek for. We must know in some measure or degree what it is that we want to know or find.² It is only inasmuch as the question itself anticipates the answer that we can determine what the answer is when it is discovered, or determine what may be or what cannot be the answer, or what is likely to be an answer, or what points in the direction of an answer. *A priori* knowledge consists, then, in whatever prenotation of the answer is presupposed in a question. What is thus presupposed varies with the nature of the question and is more or less specific according as the question is more or less specific. With the development of knowledge and belief through synthetic process, questions which were comparatively indeterminate become continually more determinate, so as to confine their answer within a narrower range of alternatives. I am aware that *a priori* knowledge, as thus defined, is not pure or absolute but empirically determined and relative. Purely *a priori* knowledge, as Kant attempts to conceive it, is an impossible fiction, which is based on the impossible view of synthesis as the bringing together of unity and multiplicity. Deductive synthesis presupposes empirical synthesis, and

² Cf. Plato: *Meno*, 80.

empirical synthesis is throughout empirically determined. The Kantian reply would of course be that I am ignoring the Principle of Judgment. The synthetic activity, he might say, as a conscious process is indeed always concerned with empirical detail. But, owing to the preconscious synthesis (of Schematism), we are equipped from the outset, in confronting this detail, with certain universal principles, each relevant to an essential aspect of all objective phenomena considered as existing in time and space.

Both the mind and its objects being thus prepared, the development is made to consist in the subsumption of particular phenomena under these general rules. The schematised "concepts of the understanding" are regarded as universal predicates of the phenomena.

This doctrine seems to me to make shipwreck on fatal difficulties. The first is that, granting the known validity of the principles, they cannot do what is required of them. Take for instance that of causation—every event is preceded by some other according to a universal rule. Applied to a particular occurrence, this would only yield the knowledge that this event must be preceded by *some* other according to an invariable law. But it does not at all determine what shall precede and what follow: it does not at all determine the special laws of sequence. In finding these we must be dependent, as Hutcheson Stirling insists, on empirical cues. What, then, makes them cues? What makes one cue or combination of cues a more likely guide than others? The general principle that every event is preceded by some other according to some rule is certainly not sufficient to supply the cues required. It does not even suffice to determine whether the conditioning events are more likely to be near or remote in time or space relatively to the conditioned. The difficulty is only intensified if we take rigorously the Kantian position, that the knowledge of the temporal sequence of B on A not only essentially involves, but actually *consists* in the knowledge that B is causally determined to follow A rather than to precede or coexist with it. If this were so it would follow that we could

never know any temporal sequence of B on A at all. To know any such sequence would be simply identical with knowing of the presence of certain special conditions which, in accordance with a universal law, determine B to follow A instead of preceding it or being simultaneous with it. But how we can reach or attempt to reach such laws unless we start with sequences already otherwise determined, it is impossible to see. It may be said that this interpretation of Kant is overstrained and that it is only the order of objective and not that of subjective sequences which is determined for our knowledge purely by causal rules. The series of our immediate sense experiences—of representations in us—is, when and so far as we attend to it, apprehended as occurring in a certain order just because it does actually occur in this order. It is only physical events transcending immediate experience which require to have their order primarily and solely determined for us through causal conditions. Let me note that if we accept this view of Kant we are not at liberty to substitute the other when it is convenient for meeting an objection. We must not say that subjective sequence is on a level with objective sequence, inasmuch as it not only occurs but is known as occurring. On the contrary, we must admit that there is good ground for the distinction which Kant makes sometimes (e.g. in the *Prolegomena*) between (subjective) Judgments of Perception and (objective) Judgments of Experience. Assuming this, the problem will be to account for our knowledge of a system of events of which subjective sequences are only a partial phase. How can the mere generality that every event is followed by some other according to an invariable rule supply what is needed? In fact, when it is necessary to be explicit, Kant cannot help introducing postulates for which he has in no way prepared us. He presupposes a complex situation in which the percipient already distinguishes his own body, as moving under subjective control, from other bodies external to it. Sequences in immediate experience which are found to be reversible at will are, for that reason, taken to imply only motion on the part

of the percipient as their causal condition. They are therefore not apprehended as involving change in the external object. Sequences which are not thus reversible at will are taken to be causally conditioned apart from the behaviour of the embodied self, and are therefore regarded as events succeeding each other in the external world. Throughout, it is tacitly taken for granted that we have, in some way, a peculiar insight into the connexion between our own will as cause and its fulfilment as effect.

It is needless to carry this sort of criticism further. The point is that pure *a priori* generalities, even if we suppose pure schematism as a preconscious activity, are quite inadequate to account for the synthetic process through which knowledge develops. What is required is an empirical *a priori*, which though it transcends experience has always its source in experience. In virtue of the unity of being, which is revealed in knowledge, all partial features and aspects of the whole, including the contents of immediate experience, raise, at least potentially, questions concerning their continuation within the context of the whole, and their connexion with each other within this context. So far as such questions pre-determine what is relevant to their own answer, so as to guide the process of seeking and searching, knowledge is *a priori*. From the nature of the case all knowledge has an *a priori* aspect, specially differentiated according to the specific nature of the object as ultimately conditioned by immediate experience. It is true that as knowledge develops in detail there also emerges a growing insight into the general constitution of the whole in its fundamental form of unity; and we may formulate the insight thus acquired in general propositions—e.g. propositions concerning the forms and conditions of causal process, or concerning space and time. But it is a mistake to regard such principles as a ready-made possession of our minds, from which we start as rules under which the special data of experience have to be subsumed and so linked with each other. For the same reason it is rash to assume that any definite formulation of such principles

is final, so as to require no modification with the further development of knowledge.

The Unity of the Universe and the Ultimate Distinctness of its Parts.

Inasmuch as the universe is one, all partial existences, however simple or complex, are capable of raising questions which constitute so many distinct and relatively independent *a priori* points of departure for synthetic activity—so many jumping-off places. This distinctness and relative independence of partial existences is comprehended within the unity of the whole, but is not and cannot be in any way annulled by it. What would be incompatible with unity as I understand it is that anything short of the whole, whether God or a buttercup, should be *self-complete*. Take the hackneyed illustration of the "flower in the crannied wall". What Tennyson and the Hegelians appear to assert is that if all the potential questions which might be raised by the flower were answered, the answer would be a complete knowledge of the whole universe of being. To me this seems a most misleading statement. What I take to be true is as follows. The questions which have their source in the flower cannot be answered without relatively fresh and independent data. These data in their turn raise fresh questions which again demand fresh data, and so on. The absolute completion of this process would no doubt involve a knowledge of the universe through and through. But such omniscience would be the final answer to a complex of questions of which those concerning the flower would be a vanishingly small and insignificant part. In following out the others we should lose sight of the flower altogether. It is true that, whatever we may come to know, questions might conceivably be asked concerning its relation to the flower. But the limitations of subjective interest prevent us from persistently making such inquiries; and even if we could do so, the attempt would for the most part be futile, as owing to our relative ignorance we should have no means of reaching any definite answers. Only if the synthetic

process was ideally complete could we know the determinate relation of every partial feature of the universe to every other within the unity of the whole. Then and then only would there be in actual fact *thorough-going* unity of apperception. For finite individuals this thorough-going unity of apperception is an ideal limit implied in the serial process of synthesis, somewhat as the number two is implied in the series $1 + \frac{1}{2} + \frac{1}{4}$ etc. But it always falls infinitely short of being realised in this process. Thus Kant, in founding his proof of the validity of the categories on the thorough-going unity of apperception, is really founding it on the validity of a regulative idea—the subjective counterpart of the unity of the universe as a regulative idea. In so proceeding he was, in my opinion, perfectly right. The ultimate ground of the possibility of synthesis is expressed, not in the principle of judgment, but in the regulative ideas. The misfortune is that Kant himself was not aware of the logical implications of his own position. If he had been, a large part of the Critique would have taken a very different shape. What is perhaps even more important, he would have found no ground for his distinction between the logical status of Practical and Theoretical Reason. For both equally depend on the validity of regulative ideas.³

Is Distributive Unity a Category?

Distributive unity is not a Category in the Kantian sense, because in this sense there are no Categories. There are no

³ I am tempted to add a word here on what is frequently taken to be an implication of the Unity of Being. It is supposed that the unity of the whole must mean that if anything whatever were in any way different from what it is, everything would be correspondingly different. I do not see that this follows. All that does follow is that if A might be different without B's being different, then the ground of their relative indifference lies in the nature of the whole system of which A and B are parts. Take as an extreme and, as I think, an impossible instance, the libertarian theory of Free Will. The libertarian says that when I freely choose A rather than B, all precedent conditions may be just the same as if I had chosen B rather than A. This, if otherwise possible, is not incompatible with the unity of the universe, provided that the situation in which I am capable of free choice itself requires to be accounted for within the universal system.

"principles of judgment" whereby we bring together the special data of experience like beads on a string. For me, the word Category, if it is to be retained at all, must carry quite different implications. I mean by it an ultimate form of unity belonging to the constitution of the universe in some ultimate aspect of its being. More precisely, such forms of unity are called categories inasmuch as they stand for fundamentally diverse ways in which partial existence may be essentially incomplete, and so raise an infinity of potential questions, each of these being a potential source of some kind and degree of *a priori* anticipation. Whether and how far potential questions become actual depends on the previous development of knowledge, and on subjective interest—i.e., on attention as essentially a prospective and interrogative attitude of mind. Attention, thus conceived, is in fact identical with Kant's synthetic activity, so far as this is not taken to be a preconscious and timeless process. The synthetic activity is successful in so far as questions having their source in distinct data share in a common answer, each datum contributing to answer the questions raised by the others. It is in this sense that coherence is a positive test of truth.

This is what I mean in asserting that causality is a category, and it is also what I mean in asserting that distributive unity is a category. The universe of Being, as including temporal process, has causal unity. We may, from the point of view of our present knowledge, lay down propositions intended to express the most general ways in which partial processes are connected with each other within the unity of the whole. We may, for instance, say that partial changes and changeable states, being partial phases of one all-embracing process, are, in their occurrence and their possible variations, determinate functions of other partial changes and changeable states. But such formulas, including the Kantian, presuppose knowledge already acquired in dealing with empirically determinate causal questions—and more especially those which arise in the course of practical activity. It is, in my view, wrong and even absurd to regard

the process of dealing with concrete problems as consisting in an application of such generalities, considered as ready-made rules, to particular cases subsumed under them. We may indeed maintain that if the general formulas were not valid, our procedure in detail would be invalid. But it is the validity of our procedure in the concrete which logically justifies the formulas, and not inversely. It is in this way that we must interpret Kant's proofs of the principles of judgment, if they are to be saved from being vicious circles. His argument is that if the principles are not true, there can be no knowledge through experience—through observation and experiment. But what right have we to affirm that there is knowledge through experience? What right have we to assume that observation and experiment yield even probable beliefs? We cannot without a vicious circle make the principles rest for us on the possibility of knowledge through experience, and also make the knowledge through experience rest, for us, upon the principles. In the long run knowledge through experience must carry its own evidence with it—evidence at least for probabilities and for that basis of certainty which is implied in probability. It is useless to say that there is no question of "evidence" at all because knowledge through experience is taken merely as a fact. This must mean that what is known through experience is assumed to be fact. But matter of fact, as known through observation and experience, is never purely and abstractly factual. It never simply coincides with immediate experience—with "inner or outer sense". To fall back on matter of fact is therefore not to give up all appeal to evidence, but to appeal ultimately to the evidence which is involved in the concept of a fact. And this evidence just is Being itself revealing itself to us in our dealings with concrete reality, so far as we are conversant with it through the part of it which we immediately experience.

Starting from the above explanation of the term Category, we are justified in claiming the title for Distributive Unity, although, as we shall see, this presents peculiar features which distinguish it from other categories. As a general formula,

corresponding to the Kantian "principles", we may suggest the following. "All beings are related to each other as members of related or identical classes or kinds forming a system which we may call the distributive unity of the universe." It is implied in the formula that there is at least one class which comprehends everything, i.e. the class "all beings" or "something or other". The relations involved in distributive unity include similarity and dissimilarity, contrast, disparity and also others to which I shall presently refer.

Obviously no such formula as I have given can serve as a rule which has only to be applied in order to constitute synthesis. Synthesis depends objectively on the essential incompleteness of partial existence within the unity of the whole in its concrete fullness. There are various ways in which partial existence may be incomplete. These we distinguish as categories, and distributive unity as one of them.

Proof of the Formula for Distributive Unity.

If distributive unity is a category, it ought to be possible to give a "transcendental proof" of its formula, analogous to those given by Kant for causality and the other so-called principles of judgment. If I am not much mistaken, this is a peculiarly easy undertaking. For all the considerations which can be urged in proof of the other principles converge to prove this. They must do so inasmuch as distributive unity is essentially involved in all other categories, and so may be regarded as the category of categories. It is so involved not only in the ultimate forms of unity which we call categories, but in all complexes, however limited. Further, it is involved in two distinguishable ways: in part it is a precondition of other forms of unity, in part it is logically generated by them. Take by way of illustration a special complex, e.g. a geometrical figure such as a circle, or the working mechanism of a watch. It is certainly not a distributive unity in which the works of the watch are united with each other. It is rather a causal and teleological unity. But distributive unity is presupposed,

as the works must consist of a general kind of material and have a certain kind of shape. None of them, I presume, could be made of treacle or loose sand: and each of them must be of a kind of material and of a shape appropriate to its special function. Similarly, a tune cannot be made of colours, nor a picture of sounds, nor a syllogism of potter's clay. The fundamental principle is the familiar one that form presupposes an appropriate matter. It is only necessary to add that "appropriate matter" means matter of an appropriate kind or class.

Reverting to the watch, we can use it to show the way in which distributive unity is not only presupposed but is logically generated by other forms of unity. The several parts of the mechanism of even a single individual watch are members of the class "the works of this watch". To be one of the works is to be either this, that or the other of them, and so to belong to a distributive unity. From this point of view we can understand how Kant came to connect the disjunctive judgment with the conception of a system of interdependent parts. What is true in this contention is that wherever there is a non-distributive system there is, corresponding to it and dependent on it, a distributive system—a class with members. Where Kant goes wrong is in the failure to recognise that the distributive system is quite distinct and different from the complex unity on which it is founded. It is a sheer blunder to regard the distributive unity expressed in a disjunctive judgment as requiring only to be schematised in order to be transformed into the category of reciprocity.

What I have asserted for minor unities must for this very reason hold good for categories, as I conceive them—for those most comprehensive unities of which the minor unities are essentially incomplete fragments. It will be well to consider some of the Kantian categories separately. Take first that of extensive magnitude. It is noteworthy that Kant, in stating the principle for this, and indeed for all the other categories, with the doubtful exception of reciprocity, expresses himself entirely in terms of distributive, or as he would say "discursive", concepts. And yet he has no good

ground for asserting the validity of the principle except on the assumption that he is dealing with a comprehensive unity which is not that of a class, but rather of what in his *Aesthetic* he calls an individual whole. The principle is that every external phenomenon has an extensive magnitude. The justification of this, for Kant, is that they all fall within the unity of one space. But, following the lines of the *Aesthetic*, he assumes that spatial unity, inasmuch as it is not a discursive concept, cannot be a concept at all, but is somehow given immediately in sense. This, of course, is an impossible position. The truth which underlies it is that the unity of the spatial whole presupposes that its parts, taken distributively, are extensive magnitudes, and that we can only know what extension is because we immediately experience extensive sense-presentations. "Extensive magnitudes" is thus a discursive concept presupposed in the spatial whole. On the other hand, the distributive universal "parts of space" is not thus presupposed; rather, it is logically generated by the conception of spatial unity. Only in this way can we account for the general conception of extensive magnitudes as bounded by others, and so having shape and relative situation, and also relative size, determinable by measurement, which again involves units and standards of measurement.

Passing to causal unity, we may take this to include Kant's three categories of Causality, Substance and Reciprocity. For causal process involves everywhere the three aspects of ordered sequence, permanence and simultaneous interaction. Causal unity presupposes changes and changeable states and relations, and things which, persisting in their changes, mutually determine each other. It cannot therefore be apprehended in synthetic process apart from the distributive universals: "changes", "persistent subjects of change", "simultaneous subjects of change". Thus the special Kantian formula for causality on the side of sequence is a distributive statement about events, that each follows the other according to a rule. Causal unity is the unity of the universe, as including temporal process as such, and presupposes the dis-

tributive universals: "successive existences", "continued existences" and "simultaneous existences". All successive, persistent and simultaneous existences are connected with each other within the non-distributive unity of the one causal system which logically presupposes them, as form presupposes appropriate matter. On the other hand, there are distinctive universals which are not thus presupposed, but are rather logically derivative from causal unity—e.g. the conception of all successive existences as essentially successive states of something which changes, and of that which changes as including its states within the unity of its whole being; or, again, the conception of antecedent changes as causally determining or cooperating with others to determine subsequent changes—in other words, the class concepts of antecedent causal and partial causal conditions, and the correlative class concepts of subsequent effects. Finally there is the class concept of subjects of change as simultaneously interacting. It should be needless to say that everywhere in making these distinctions, I regard them as falling within a unity, so that whatever is distinguished is incapable of separate being, and therefore incapable of being known in isolation. Causal unity for me includes not only Kant's special category of causality, but what he calls substance and reciprocity. For causal process involves everywhere the three aspects of ordered sequences, permanence in and through change and simultaneous interactions. I shall now further develop my position by considering each of these in turn, with special reference to Kant's treatment of them.

Substance in Kant stands for the form of unity in which successive existences are related as successive phases in the history of one and the same thing, which is on that account said to change without losing its identity. This identity of what changes through and in its changes is certainly not a distributive unity. None the less analysis shows that it is conditioned by and conditions distributive universals. Note first that the identity is not separable from the successive differences. It is the identity of that which is changed and of

nothing else. This is a sheer contradiction unless we regard what is identical as a complex unity *including* all its successive states. The same unity which includes the state *a* also includes the state *b*. If we ask how this is possible we find that the transition from state to state presupposes that the successive differences are all particular and specific instances of some general character of the changing thing. Motion, for instance, is change in position. The body which moves is always in some position or other. The motion consists in the successive substitution of one position for another. The like holds for the change of a sound in pitch or loudness. Kant's principle of substance asserts that, in the external world at least, there is always only substitution of successive states and never absolute beginning or annihilation. From my point of view, we ought also to assert it for psychical existence or show positive reasons why this need not be so. However this may be, it is clear that so far as there is identity of what changes throughout its successive states, this identity presupposes distributive universals. It is obvious that it also logically generates distributive universals such as "states", "changes", and "changeable things".

It would take too long to examine adequately the successive and simultaneous aspects of causal process. It will be enough to refer to the conception of a causal law. Whether we take account of simultaneous or antecedent conditions or, as we practically always do, of both at once, a causal law is a proposition asserting that conditions of a certain *general* kind have consequences of a certain *general* kind. Further, all but the most crudely empirical rules express more or less definitely the fundamental dependence of specific variations in the general nature of the effect on corresponding variations in the general nature of the conditions. This is a very important way in which causal unity presupposes distributive universals.

I have now perhaps said enough to show why I hold that distributive unity is so involved in the other categories that the principle asserting it does not require a separate proof.

Comparison and Classification.

I must now begin to deal more directly with the main difficulty raised by Kemp Smith, which may be stated as follows. Relations of resemblance, contrast, disparity, etc., must, at least in the case of empirical universals, be previously and independently ascertained by a comparison of particulars, before these particulars can be apprehended as members or instances of the same or of distinct classes or kinds. But this ought not to be possible, if I am right. It ought not to be possible because, on my view, such relations can only be known as relating terms which are already known as falling within a distributive unity—i.e. as belonging to the same or to different classes. If, in order to be aware of a_1 as similar to a_2 , we must be aware of both of them as belonging to the class A, it is preposterous to say that in order to refer them to the class A we must first independently ascertain their resemblance.

Note, in the first place, that the whole point of this objection lies in the assumption that resemblance or another relevant relation must be discovered by a *prior* and *independent* step. It is not sufficient that reference to a class and apprehension of resemblance should be mutually dependent, so as always to be united in the same cognitive act. Even if reference to a class always involved comparison in this way, my position would be untouched. But as a matter of fact this is the exception rather than the rule. In taking something which I see for an egg, I do not need either previously or simultaneously to compare it with other particular eggs, either actually present to the sense, or ideally recalled from past experience, so as to discover a relation of resemblance between them. It may indeed be said that in taking an egg for an egg when we see it, we apprehend it as resembling *all* other eggs. But this is in consequence of our having already classed it as an egg. It does not mean that we see the other eggs before our minds as several particulars, and compare them with the one before us.

I shall deal in the sequel with the question how it is possible to refer something to a class or kind without using as a clue prior or even simultaneous resemblances or other relevant relations between the particulars which are grouped together. At present I only note that as a matter of fact we do commonly proceed in this way, and that therefore there must be some explanation. But before entering on this topic, I shall first examine the conditions under which comparison is necessary or, at any rate, useful. These seem to me to be twofold. (a) We may have recourse to comparison in attempting to assign a *reason* why certain particulars are included within a class and others not. This is illustrated by the Socratic method of seeking a definition of the words of ordinary language. (b) Comparison is also useful and frequently indispensable when we encounter a difficulty in deciding whether something does or does not belong to a certain class or kind in which we are interested. It is with (b) that we are principally concerned, though I shall presently also have something to say about (a).

As regards (b) we have first to inquire in what circumstances the difficulty of referring this or that to a certain class emerges. It may arise in connexion with theoretical curiosity, such as is presupposed in (a). But this occurs mainly in relatively advanced stages of mental development. The typical difficulty arises in connexion with practical motives. To understand how this takes place, we must bear in mind that, in referring a thing to a class on account of its having characters of a certain sort, these characters are nearly always in part inferred, and the inference may be misleading. A child, for instance, on seeing a white substance, takes it for sugar—i.e. for something which will taste sweet and agreeable if he puts it in his mouth. The agreeable sweetness, which leads him to take the stuff for sugar, is an inferred character; and the inference may be deceptive. On trial he may experience nauseous saltness instead of agreeable sweetness. Such disappointments may prompt a process of comparison directed to the discovery of some difference in

visible appearance between the white stuff which is sugar and the white stuff which is not sugar. If a relevant difference is found, then it may be said that the result of the comparison is an antecedent condition determining whether a white granulated substance shall be taken for sugar or not. But it is very important to notice in what way it is an antecedent condition. In the first place, the comparison is between things which are already referred to one class, the class of substances having a certain general kind of visible appearance, within which both sugar and salt are included. The interest in comparing is an interest in distinguishing species within this wider class.

In the next place, the mere discovery of *some* specifying difference is not enough by itself. Merely to distinguish within the wider class a substance which glitters from one which is dull is not by itself to distinguish between salt and sugar, but only between the special kind of stuff which is dull and that which glitters. And so far, let us note, the distinction resulting from comparison is not a prior and independent one on which the distinction of classes depends as a subsequent and dependent step. On the contrary, the distinction between the particulars and the apprehension of them as of different kinds are mutually complementary and inseparable. Neither is prior to or independent of the other. But this is not true of the way in which comparison of particulars determines the distinction between sugar and salt. The reason is that the mere result of comparison is not by itself enough. The specifically different characters revealed by comparison must also make it possible to infer *other* specifically distinct characters of the substance—sweet taste, or salt. It is on these inferred characters that the distinction between salt and sugar depends. In general, either the awareness of relations between particulars is coincident with the reference of them to classes or kinds, or it is not by itself sufficient for this reference, apart from a further inference on which the classification directly depends.

Is Similarity the Only Relation between Members of a Class as Such?

Wherever there is a similarity between particulars, whether things or characters of things, the particulars, *pro tanto*, fall within one class; so far as there is dissimilarity between them they belong to different classes. Does the converse hold good? Is it true that so far as particulars belong to the same class, they are *pro tanto* similar to each other, and that so far as they belong to different classes, they are *pro tanto* dissimilar? In dealing with this question, it seems to me that we are bound to recognise an ambiguity in the use of the terms *similarity* and *dissimilarity*. They are employed in a wider and in a narrower sense. In the wider sense similarity is simply taken to mean whatever relations subsist between the members of a class or kind. Virtually, starting with this as a definition, we can say that all colours must resemble each other inasmuch as they are colours; that all qualities must resemble each other inasmuch as they are qualities, and then even that all existences must resemble each other inasmuch as they are existences. On the other hand, if we attempt to compare, let us say, colour with colour in order to discover their resemblances we are faced with difficulties. It is easy enough to discern resemblance between a greenish blue and a greenish yellow. But we may well doubt whether in the same special sense we can assert resemblance between a pure blue and a pure yellow, or a pure red and a pure green. It may seem preferable to say that there is a qualitative affinity and contrast rather than resemblance. If, again, we consider the relation between a sound and a colour, we may indeed say that the colour quality is dissimilar from the pitch of the sound. But we are using the term dissimilar in the very wide sense in which it is equivalent to "not of the same kind". We are not using it in the more special sense in which a greenish yellow is dissimilar from a greenish blue or even that in which a pure yellow is dissimilar in quality from a pure blue. In these last instances the dissimilarity does not exclude partial similarity, or at least

affinity. But we cannot discern even partial similarity or any qualitative affinity between pitch and colour. Their qualitative relation is one of mere disparity, though we may still assert in the wider sense that they are alike in being sensible qualities. Similarity in the narrower sense is most obviously absent between the members of those distributive universals which are logically derived from other forms of unity. Take, for instance, the class "parts of this chair". The relations between back, legs and seat, which belong to them *quâ* members of this class, are just the relations which connect them within the unity of the chair. They are not relations of resemblance discernible by comparison of the back with the legs, or the seat with the back. As the distributive universal is generated by a form of unity which is not distributive, the relations between its members are not distinguishable from their relations within the complex whole from which the distributive universal is derived. There need not be relations of resemblance except in so far as the original whole itself presupposes resemblance of the factors which enter into it. Of course there are many chairs which are similar to each other, and the parts of one chair will therefore resemble the parts of another. But "parts of *this* chair" is a distributive universal, just as much as "parts of *a* chair". I have taken a trivial example. But the principle applies to all universals derivable from other forms of unity, including the fundamental forms which we call categories. It applies to such general concepts as "contents of space", "causes", "effects", "causal factors contributing to this or that effect", "changeable things", "states of changeable things".

Kinds of Sensible Qualities.

I have noted above that when on critical reflexion we inquire why certain particulars are grouped together as members of a class we may proceed by seeking to find resemblances or other relations which they bear to each other and not to anything that falls outside the class. This is the only method to which we can have resort when we cannot frame

a definition, or when we have only a provisional definition which requires to be tested. It is, evidently, the only method that can be followed in dealing with sense qualities such as colour and sounds, which in their intrinsic nature are indefinable.

Some kinds of sense qualities, when considered in this way, present a difficulty. Take "colours" as a typical example. It is true that on comparison we are able to discern relations of resemblance, or at least of qualitative affinity, which colours have to one another and to nothing else. But it may be doubted whether the unity of kind implied in the qualitative relation is enough to account for the ease, completeness and certainty with which we come to distinguish colours from all other contents of sense experience. To meet this difficulty adequately we must, I think, take into account the existence of universals derived from forms of unity which are not distributive. Colours are united with each other within the extensive field of visual sensa; within this field they bound each other and so have shape. The same particular colour passes from place to place within the field, and the same place may be successively occupied by different colours. But other sensa than colours are not found within it and we cannot even imagine them within it. The extensive field of cutaneous sensa is quite distinct. We cannot even imagine red colour so surrounded and bounded by the sense qualities of coolness, or warmth, or roughness, or saltiness as to have a triangular outline, like the red triangle of Bass's beer. Thus colours are marked off as the class of qualities which are connected with each other within a certain extensive whole, and as presupposed in the constitution of the whole. Much more might be said on this topic. But this must suffice.

Synthesis and Distributive Unity.

In synthetic activity we seek to complete what is relatively incomplete in our knowledge, as this exists in any moment of our mental history. There is synthetic activity so far as there is interest and attention. Attention, in the

widest sense, is interest so far as the satisfaction of interest depends on the further development of cognition. So regarded, it is always a prospective or interrogative attitude of mind. It looks forward to what is not yet present to consciousness and involves, at least implicitly, the question—What next? or What more? As various specific interests emerge, beginning with those which are instinctive, there are correspondingly various questionings. But all these are specific determinations of the interrogative attitude involved in being mentally alive and awake.

The Categories, as I conceive them, are fundamental ways in which the partial objects of knowledge may be essentially incomplete. In other words, they stand for ultimate types of actual or potential questions—directions of attention. In this respect, distributive unity occupies a peculiar position, inasmuch as it is not coordinate with them as they are with each other, but, so to speak, pervades and interpenetrates them all. Under whatever other category a question may fall, it also falls under this. It does so, not because it is this or that question, but just because it is a question at all. There is no question where there is no reference to alternatives to be further specified or particularised in the search for an answer. But where there are alternatives there is distributive unity.

It follows, as a corollary, that interest in classes and kinds and their relations is not separable from other interests but is, so to speak, parasitic. I do not mean merely that, except at advanced levels of development, the interest is almost entirely practical and that it remains so in a very large measure to the end. Even where the theoretical interest does emerge, it is almost wholly subordinate to other theoretical interests—e.g. in causal connexions. We classify in order to preserve other knowledge.

Clues to Classification.

I now directly face the question which for Kemp Smith is crucial. What is it that determines us to apprehend a certain particular as of a certain kind or not of that kind?

Do we depend on "inferential clues" or on "simple inspection"? I answer (1) that there can be no inference apart from some apprehension of distributive unity; and that if "simple inspection" is taken to mean a way of *knowing*, the same is true of it. There is no knowledge which is not knowledge of things and their characters as belonging to sorts and kinds. But (2) if for "simple inspection" we substitute immediate experience, considered not as being itself knowledge but only as an essential factor in knowledge, then immediate experience is an ultimate condition determining the reference of particulars to this class rather than that. In primary knowledge as distinct from inference it is the sole condition. Inference presupposes primary knowledge and therefore presupposes primary knowledge of distributive unity. But inference, in its turn, conditions the further development of the knowledge of distributive unity. It does so in a manner which requires to be defined if we are to avoid confusion.

In what way precisely is inference a precondition of the reference of a certain particular to a class or its exclusion from that class? Only in a strictly limited way. The question whether a particular thing is of a certain kind coincides with the question whether it possesses characters of a certain kind. If and so far as our ground for ascribing characters of this sort to it is inferential, the reference of the thing to a class depends on inference. Is this white stuff sugar or not? For a child we may take this to mean: Is it sweet or not? If he infers from its visible appearance that it is sweet, he also at the same time infers that it is sugar. It is important to note here what is *not* inferred. It is not through inference that the child thinks of sweetness as a kind of quality. What he infers is that a quality of this kind belongs to the white stuff which he sees and handles. Further, when he has inferred that this quality, and perhaps others also, belong to the white stuff, it is not by an additional inference that he recognises the white stuff as sugar. That it has these qualities and that it is sugar are for him the same fact. Throughout the process, there is no simple inspection of any particular which

does not include the apprehension of it as an instance of some sort or kind. There is no place for simple inspection of the bare particular as a prior and independent step.

The same is true also for primary knowledge as ultimately conditioned by a constantly flowing stream of immediate experience. What is immediately experienced can never be known by itself, apart from its connexion with what is not immediately experienced. On the other hand, we could not be cognisant of anything else if we were not coincidentally cognisant of the content of relevant immediate experience. We could not, for instance, be cognisant of intensive or extensive magnitude, if we were not cognisant of the intensity and extensity of our own *sensa*. Now, like all knowledge, the knowledge of what is immediately experienced involves the category of categories—distributive unity. Our *sensa* and subjective states, in so far as they are known at all, must be known as of sorts and kinds. What determines the distinction of sorts and kinds? Presupposing a certain direction of interest and attention, which at the outset is dependent on congenital disposition, there seems to be only one possible answer to the question. The content of immediate experience is in its own intrinsic nature such as to belong to distinct sorts and kinds, and this is the reason why it is known as belonging to sorts and kinds. We may call such knowledge simple inspection, or knowledge by acquaintance or intuition. But the simple inspection always involves distributive unity. The immediate experience which conditions it is not itself a knowing at all and therefore not an inspection.

Clues to Synthesis under other Categories.

Categories are fundamental ways in which the content of immediate experience is essentially incomplete. They are thus distinguishable from each other only in so far as there are corresponding distinctions within immediate experience itself, e.g. between extensity and intensity, succession and simultaneity. Here an important question emerges. How far is it true that the categorical forms of unity not only connect

the contents of immediate experience with existence beyond themselves, but also at the same time connect these contents directly with each other, however incompletely? I have just been urging that this does hold good for distributive unity. The contents of immediate experience as such are grouped in sorts and kinds; and if this were not so there could be no knowledge of sorts and kinds at all. The like may be said of the categories of intensive and extensive magnitudes. The extensive character of *sensa* is distinguished from their intensity and from the intensity of subjective states, such as desiring and being pleased. We can discern varieties and differences in both extensive and intensive magnitude within the sphere of immediate experience itself. If we did not, we could not know the intensive and extensive magnitude of anything else in primary knowledge, and such inferential processes as those involved in measurement by superposition would be impossible.

Even when we turn to the causal categories there is at least one of them which seems to be in an analogous position. I mean "substance", as Kant conceives it. The identity in change of what changes is certainly found in immediate experience, not indeed in a "thoroughgoing" but in an imperfect and essentially incomplete way. There is, e.g., the identity of a sound as it rises or falls in pitch or loudness, or of a colour *sensum* as it shifts its position in the sense field of colour. The same sort of identity is found in the presentation continuum and indeed in our mental life as a whole.

But, if Hume is right, it is otherwise with what Kant calls distinctively Causality and also with Reciprocity. The contents of immediate experience are called by Hume perceptions, and the thesis from which he starts is that all our perceptions are "loose and separate". So far as this means that they are not directly related *inter se* in the way of simultaneous interaction or successive causal determination it is a grave question whether he is not right. If he is right, it follows that we can never know causal connexion by acquaintance or memory, but only sequence and simultaneity.

And this is an accepted commonplace with many philosophers. If we maintain it consistently, we are bound to recognise a vital difference between causality and such categories as intensive and extensive magnitude—a difference which was, I suppose, at least obscurely present to Kant's mind in distinguishing between mathematical and dynamical categories. The world as a system of intensive and extensive magnitudes includes within it, as a partial or essentially incomplete fragment, the extensive and intensive aspects of our sense presentations and other immediate experiences. But if the contents are not causally connected with each other in however partial and incomplete a manner, the category of causality is on a different footing. It is indeed a fundamental way in which what is immediately experienced is essentially incomplete and cannot therefore be known except as a phase of a whole which transcends and includes it. But immediate experience is not itself a causal complex, however imperfect. It is only a successive and coexistent complex.

If this be true, it follows that we have no knowledge whatever of causal connexion through acquaintance or memory. Hence, in the search for special causal relations, we must be wholly guided by inferential clues. Not indeed that they are inferred to be clues: what primarily makes them clues is the peculiar way in which the partial phases of temporal process are essentially incomplete. But they are inferential in the sense that they are clues to inference. And there are no other clues, if the view I am assuming is correct. There is no room for "simple inspection", as there is in the case of other categories, and more especially in that of distributive unity.

But is the Humian view right? It is generally admitted so far as sense-experience is concerned. But many philosophers would deny it for the relation of subjective activity in willing and attending to consequent presentational changes. Here it is maintained or suggested that we have knowledge of causal relation by acquaintance, as we have of sequence and simultaneity and relative intensity. Hume's own attempt to

refute this view cannot be regarded as cogent. He urges that subjective striving frequently fails of fulfilment. What we will sometimes actually occurs and sometimes does not. Whether this is so or not depends on other conditions which may be unknown to us. This whole argument rests on the unwarranted assumption that a causal relation can only be a relation between the total cause and the effect, so that, given the cause, the effect must inevitably and invariably follow the cause. It does not show that conation is not one causal condition among others, and it does not show that we cannot know it as such, within the sphere of immediate experience. What it does show is merely that such causality is essentially incomplete and cannot exist or be known except as a partial phase of a wider system. If nothing but Hume's objection stood in the way, there would be no good reason for regarding the category of causality as in principle on a different footing from the mathematical categories.

This view is exceedingly attractive, and I feel much hesitation in rejecting it. None the less I cannot, as at present advised, accept it. I cannot see that we ever perceive the causal connexion between our own conation and consequent presentational changes—e.g., a series of motor sensa, or the retention or dismissal of a mental image—as we perceive relations of sequence or resemblance within the content of immediate experience. We seem always to depend, even here, on inferential clues which are such for us only because willing and striving are primarily known as in their own way essentially incomplete; and this means "causally" incomplete. They need to be completed by their consequences, and the difference they make to the course of events. But their connexion with this or that special effect seems never to be known as an immediately experienced connexion, but always to be determined by inferential clues. Such are the identity of what actually occurs with what we want to occur; the immediacy with which conation is followed by fulfilment; the differential and systematic correspondence between the variable directions of conation and the variable events which

follow and fulfil it; and the gradual transformation of relative failure into relative success through repeated trials.

I conclude that, even in subjective striving and willing, causal relations do not fall within the content of immediate experience, and cannot therefore be known by acquaintance or memory. None the less it may be recognized that our own activity plays a unique and indispensable part in the development of our causal knowledge. In the first place, it is only through it that we have the notion of active tendency and of the causal system in general, as involving the interplay of active tendencies reinforcing, resisting and modifying each other. In the next place, though the clues to the connexion of subjective activity with special effects may be only inferential, yet they are constantly occurring in every moment of our lives, and that with a clearness and cogency which is hardly to be found in the relations of external objects to each other. Thus our own causality as willing and striving beings is for us archetypal and forms our primary key to the nature of causal connexion in general.

THE FORMATION OF JAPANESE ETHICS: OUTLINES AND OBSERVATIONS.

By KURT SINGER.

WHEN the Japanese emerge from the mists of pre-historic existence their morality does not differ from what we may call the ethical minimum of tribal society, a slowly changing aggregate of habits and conceptions fitted to preserve the continuity and permanence of group life, reason embedded in concrete ways of life, not in reflective thought. What is termed *Shintō*, the Way of the Gods, is a much later doctrine elaborated by priestly guilds or clans in times when the native beliefs became endangered by foreign creeds and teachings, and it bears the marks of such impacts and of defensive attitudes.

Since the 14th century, the three Imperial Insignia, the possession of which confers the right of the holder to continue the "succession of the Children of the Sun", a mirror, a sword and a jewel (or bead), have been interpreted as symbols of the virtues of sincerity, justice and mercy. Originally the gods of Japan are amoral, the meaning of god, *kami*, being simply what is powerful, superior, of unusual character and strength, a wolf or a tree of strange form, a ruler or a man of uncommon fate. Some of these *kami* are good, others bad, and between such bad *kami* and enemies no distinction is made.

One of the main objectives of cult practices is to restrain gods and spirits from doing harm, to keep them at bay and to pacify them by making offerings (very rarely human sacrifices) or providing for them dances and other forms of entertainment. The same anxiety to "settle" spirits is observed in political relations. The mind of a ruler must remain undisturbed. Even today the official formula expressing concern is that the mind of the Emperor, the

Heavenly Ruler, *Tennō*, must be "set at ease". Bad is what causes unrest, what stirs, what is disorderly (*rambō*) and therefore disturbing.

But bad is also what is unclean, at first (and for a long time) only in the ritual sense, above all uncleanness resulting from contact with dead bodies, with dirt and with happenings not in man's power. "Sin" (the usual translation of *tsumi*, better "pollution") always comes from outside and can be purged by appropriate rites. Up to this day the *tsumi* of the whole nation are twice a year cleansed in the ceremony of the Great Purification, *ōhara-e*, where all defilements, whether committed inadvertently or deliberately, are washed away, sent downstream towards the bottom of the all-purifying sea.

The offences cited in the ritual, which in its present form is handed down in a book of the tenth century, are of two kinds: 1. the so-called "Heavenly Offences", which are mainly acts causing disturbance of the process of orderly rice-planting in irrigated fields, 2. "Earthly Offences", which refer mostly to violations of sexual taboos or the rules of exogamy and other acts liable to cause calamities affecting the community. The distinction seems to correspond to the division of Japanese Gods into Heavenly and Earthly Gods, i.e. the deities worshipped by the Imperial Family and clans which had been allied to it in the conquest of Yamato, and the deities worshipped by the rulers of clans subdued by them. It is very likely that the conquering tribes, or more precisely their leader, the Amaterasu clan, introduced irrigation rice culture, or at least organised it on a larger scale and gave it a cosmic meaning, as the Children of the Sun appear to have done wherever they ruled, in Egypt and elsewhere.

The list of offences enumerated in the Ritual (*noritō*) is not considered as comprehensive. According to information recorded by Florenz, before the purification the operating priests heard the confessions of others persons and added their transgressions to the regular list.

The morality in evidence in the god, hero and king tales that survive in the official collections of mythical traditions

brought together by Imperial demand in the seventh and eighth centuries A.D., differs but little from that of any heroic age of conquering warrior clans. Against the enemy any ruse is allowed; within the community the criterion of goodness is what is called "a red heart" (the alternative is "a white heart"), which means being a sincere warrior true to his own word. The "red heart" is therefore in the *Kojiki* also called "a warrior's heart". Between friends and enemies the gulf is absolute until the enemies show "sincerity" by acknowledging as legitimate the rule of the Children of the Sun.

Into this proto-historic world Chinese books, including the Analects of Confucius, were introduced from the end of the fourth century A.D. (according to the rectified chronology established by recent Japanese and Western research). Buddhism was received about a century later. Both were built into the foundations of the Imperial rule when, at the beginning of the seventh century A.D., kingship was transformed from a clan hegemony somewhat labile and ill-defined, into a centralized monarchy patterned after the model of the contemporary Chinese Empire of the Sui and T'ang Dynasties, administered by a bureaucracy trained in Chinese etiquette and philosophy. The ethos of the new state-like structure is admirably expressed in the Seventeen Articles of A.D. 604 ascribed to Prince Shōtoku, a regent belonging to the Imperial family, and a profound Buddhist scholar; his place in Japanese history is somewhat similar to that of the Duke of Chou, one of the politico-ethical heroes who inspired and moulded the thought of Confucius.

The Seventeen Articles can be read in the *Nihongi* of A.D. 720; they have been often termed the Constitution; in fact they are nearer in spirit and character to the Preludes which, according to Plato (*Laws*, Book IV), ought to precede the text of laws proper in order to make them works of persuasion rather than of compulsion. They enjoin the veneration of the Buddhist triad, the figure of the Awakener, his Norm and his Order, which they call "the ultimate asylum of all things" and "the fundamental principles of all countries".

Most of the precepts however are based on Confucian doctrines and they are supported by judiciously selected quotations from various Chinese classics, revealing a familiarity with the highest level of Oriental thought only obtainable through intimate intercourse.

The Articles give first place to the need for harmony, arising out of tolerance and the subordination of particular interests and personal views to what binds men together. "But when those above are harmonious and those below are friendly and there is concord in the discussion of business, right views of things spring up spontaneously and gain acceptance" (Aston's translation). This idea seems to have remained the supreme norm of right behaviour in Japan during all epochs: not to insist on rights and thoughts of one's own, however justified, but to seek adjustment and integration in a spirit of reconciliation and understanding for the other man's position and feeling, according to the principle of the mutuality of human relations, which is the true meaning of the central Confucian virtue, *jên*. "Nor let us", another Article says, "be resentful when others differ from us. For all men have hearts, and each heart has its own leanings, their right is our wrong, and our right is their wrong. We are not unquestionably sages, nor are they unquestionably fools. Both of us are simply ordinary men. How can anyone lay down a rule by which to distinguish right from wrong? For we are all one with another, wise and foolish, like a ring that has no end. Therefore, although others give way to anger, let us on the contrary dread our own faults, and though we alone may be in the right, let us follow the multitude and act like them."

In such teachings the rigour of Confucian ethics seems to be blended with a strain of Taoist wisdom with its insistence on the correlation of apparent opposites and its preference for ruling by apparently not ruling. If we consider not what is written but how things actually happen in Japan we may be tempted to say that no other foreign influence on the Japanese mind-in-action has been more permanent and

more all-pervasive than that of Laotse, and it remains a proof of this affinity that it is so seldom spoken of. Whosoever is fond of talking of *tao* is under the suspicion of not having grasped its meaning.

Confucianism is much more in evidence but there is room for doubt whether in the formative stages of Japanese history its ethical moulding power was not inferior to its functional influence. It furnished a system of formal and beautiful expression, served as a cosmological framework, and confirmed the Japanese mind in its reluctance to sever what ought to be from what is, and in its aversion against conceiving political relations in terms alien to ethical thought.

The Japanese appear to be all-open to foreign doctrines but their thought has remained quite impervious to political philosophies of a Machiavellian type such as the Chinese School of Realists, or Legalists (*fa*), who discarded all spiritual justification of political rule. They readily accepted the Confucian teaching that goodness is a thing to be prized for its own sake; that right action has a cosmic meaning; that nobility of birth and efficiency of government are of no value whatsoever if the ruler and his advisors do not cultivate the virtues of the Superior Man, the *Chün tze*, who, according to the Analects, "takes righteousness as his basic stuff, practises it with the rules of correct usage, brings it forth with modesty, and renders it complete with sincerity" (XV. 17, in Waley's translation).

The order of precedence of these virtues differs in various sayings of the Master, but it seems certain that the priority attributed by much later Chinese writing to the virtue of Filial Piety, a doctrine which did so much to hinder the political development of the Chinese, was not the teaching of Confucius, who gives equal rank to the virtue of loyalty. Their common principle is: not to fail one another, as son, or as subject, or as a friend.

Not less congenial to the Japanese was the Confucian doctrine that virtue cannot be known by mere reflexion but finds its norm in tradition: right behaviour must be studied

in the life of the Wise and Great of the Past; every virtue is exemplary, and to every good intention there must correspond an appropriate form of expressing it (*li*, ceremonial or etiquette). The virtue which harmonizes etiquette with intention is called sincerity, or "being true"; in Japanese thought it often assumes the highest place, a re-interpretation on a new level, it would seem, of the archaic conception of the "red heart".

To the true Confucianist nothing is more alien and more repugnant than to observe forms without corresponding feelings, or to have feelings but not to act according to them wholeheartedly. What Plutarch (*Dion*, c. 1) related of the members of the Platonic Academy (that one could recognize them in whatever they did, as the trainer Hippomachos boasted that he could recognize his pupils by the manner in which they carried a piece of meat bought in the market) might be said of all genuinely Oriental schools of thought. Between knowing and acting the nexus is more immediate in the East than it is in the case of the modern Westerner who is rather apt to take such monolith formation for fanaticism or lack of tact.

On the other hand, Oriental thought is less easily perturbed by logical contradictions and inconsistencies, real or apparent, than the science-minded West. On the highest levels of Buddhist speculation, the Absolute is apprehended as indifferent to the distinctions of rational thought. After this world of the senses (*samsara*) has been shown to be mere appearance, and release from its suffering has been promised to those giving it up for the sake of *nirvana*, the State of Nought, *samsara* and *nirvana* are shown to be identical. According to the *Diamond Cutter Sutra*, which is much read in Japan even by laymen, merit is no merit, Buddha has delivered beings without number, and he has not delivered them. Contradictoriness is no *prima facie* argument against a proposition but an indication that the hearer may have to ascend to a higher level of consciousness in which the incompatibilities will vanish.

Kōbō Daishi (Kūkai), one of the great sect-founders of the ninth century A.D., has arranged all metaphysical and ethical systems in such an ascending scale. The lowest level is that of animalistic existence bent only upon satisfaction of appetites, without consciousness of good or evil. The next stage is represented by Confucianism: morality devoid of spiritual meaning, just enough to prevent society from falling into disorder. Then follows Taoism, as interpreted by the life-elixir seekers of the Han Period and afterwards, concerned with the acquisition of supernatural powers but lacking insight into why and whether they could be useful. The fourth and fifth stages are attained by Hinayāna Buddhism, i.e. that interpretation of the teaching of Buddha—surviving mainly in Burma and Ceylon—according to which there is no self: salvation must be secured by the uprooting of desires and appetites, acts by which the bad deeds of the past may be destroyed for the individual who practises them while the spiritual fate of others is not affected. The last five steps are those of the Mahāyāna schools of Buddhism leading up to Kūkai's own doctrine of the union of man and universe by virtue of the performance of mysteries in which man becomes one with Vairocana the Great Illuminator, who is identified in Japan with the Sun-Goddess Amaterasu-ō-mikami.

The significance of social duties, and of other forms of morality in the narrower sense, pales before such transcendental achievements. The Buddhist is "charged", though not commanded, to refrain from certain actions such as killing, robbing, unchastity, lying, and drinking intoxicating brews (*Khuddaka Pāṭha*, 53f), and there is a classification of six normal relationships (*Dig. Nik. XXXI*): between parents and children, teachers and pupils, husband and wife, between friends, master and servant, clergymen and laity, a schema akin to the five moral relations which are met in Confucianism at least since the Han Dynasty: between sovereign and subject, father and son, husband and wife, elder and younger brother, and between friends (*Doctrine of the Mean*, Legge, XX. 8). From the point of view of the more advanced Buddhist,

however, all these are very elementary rules of conduct belonging to what may be called the metaphysical nursery.

At its higher levels Buddhism is little concerned with morality, like most genuine religions, and in some sects antinomian tendencies have reached astonishingly high degrees. The ultimate aim of the Buddhist is to be saved by true knowledge; right behaviour is prized either as an automatic consequence of right insight, or as a pre-condition for acquiring it. "Such a one must be able and upright and truly straight, gentle of speech and mild, not having vain conceit of self, and he should be content, soon satisfied, with but few wants, of frugal appetites: with faculties of sense composed, discreet, not insolent, nor greedy after gifts." He will neither deceive another nor harbour anger against him, but will practise "a boundless good-will for all the world, above, below, across, in every way, good-will unhampered, without ill-feeling, or enmity" (*Sutta Nipātha*, 65).

The moulding presence of this ethos of detachment, friendliness, composure and all-openness, which finds its prototype in the figure of the Founder, can still be discerned in greater or lesser strength in most situations of Japanese everyday life, and in the expression of its more exalted states in poetry and art. Obviously it is easier to remain at every step mindful of Buddha than of the teachings of the Sermon on the Mount. But when, after centuries of great aesthetic refinement and intolerable inner-political discord, ending in protracted civil warfare, the country was at last unified under the Tokugawa Shoguns at the beginning of the seventeenth century, the new *de facto* rulers, although devout Buddhists, preferred to take their politico-ethical prescriptions from the more earth-bound and form-controlled Chinese philosophy.

Seen from the standpoint of comparative history, Tokugawa Japan appears as another instance of an Ultimate Empire, in many ways analogous to the New Empire of Ancient Egypt, the Ch'in and Han Dynasties of China and the Rome of the earlier Emperors. Politically it was a military dictatorship using the forms of a feudal-patrimonial

hierarchy but ruling more and more in the spirit and with the technique of a bureaucratic Police-State (*Polizeistaat*); a stationary society organized on corporative lines which bears a certain remote resemblance to the estates of Plato's Republic: warriors advised by philosophers and partly educated by them represent the State, which is supported by the economic activities of peasants, artisans and merchants.

The moral and intellectual centre of this society was the *Seidō*, a sanctuary dedicated to the Sage, Confucius—to make obeisance to whom was an official ceremony. Here the more promising of the young Samurai were educated in Confucianist philosophy interpreted along the lines of what was called the Tei-Shū school after the Brothers Ch'êng (Tei) and Chu Hsi (Shū), the founders of the Chinese Sung philosophy. These scholars had in the eleventh and twelfth centuries developed a syncretistic system based on much scholarly research in Confucian texts but deviating from the spirit of Confucius and earlier Confucianists not less than medieval theologians from the spirit of Aristotle.

Confucius and his disciples had been Sages in the old Oriental sense, concerned with the One Thing Needful, caring only for the One Way, *tao*, which embodies the law of man and of the universe, a norm which eludes rational explanation and systematic exposition. It is embodied not in intellectual structures but in the person of the Superior Man who guides others through his living example and through hints which must suffice for those able to grasp the truth. The Sung philosophers, on the other hand, were born system-builders; they wanted, first and last, certainty, clarity and completeness. Their main aim was to give stability and order to social life by basing relations on a theoretical system which explains the nature of things in general and states their differences, indicating to every being its place in the universal order. To achieve these ends they instinctively rather than consciously availed themselves of the whole heritage of Chinese thought, archaic, metaphysical and rational, including Buddhist teachings (although one of their major objectives had been

to counteract Buddhist influence with its plebeian concern about the fate of the individual soul after death). In this respect they resemble the Epicureans, but in its intellectual and ethical structure their system bears more resemblance to Stoic doctrines. A strain of dualism is generally accounted for by Manichæan influences which had reached China during the T'ang period.

Neo-Confucian ethics is part and parcel of a philosophy of nature the first principle of which is called *tai-kyoku*, the Great Pole; it defies predication and is therefore equated with the Nought. From it issues *li*, Norm, Order, Reason (not to be confounded with *li*, "etiquette", although the archaic meaning of that term seems to have fulfilled a similar function in early thought), a conceptual correlate of the ancient Chinese Heaven (*ti*) but unlike *ti* unable to act until it begets *k'i*, Breath, or Force, which is manifested materially in the element of Air, and dynamically in pairs of opposites patterned upon the archaic conception of *yin* and *yang*, female and male, passive and active, rest and motion, cold and warm; from the interaction of these opposites issue the traditional Five Elements or Processes (or as Professor Granet proposed, "emblematic symbols") and from these the multitude of things.

It is difficult not to be reminded of the *apeiron* by the *tai-kyoku*, of the *nous* by the *li*, of the *pneuma*, or the *archê* of Anaximenes, by the *k'i*; some may even think of Plato's late conception of the Indefinite Dyad. In reality *tai-kyoku* takes the place of the Buddhist Absolute or the Taoist Void, the *k'i* seems to be adumbrated in Mencius, and the Appendices ("Wings") of the Book of Changes account for much of the rest. None of these principles appears in Confucius.

Tai-kyoku embraces all things and is in all things but they differ according to the degrees in which they remain transparent to the *li*, the Neo-Confucian analogon of the Buddhist *dharma*, the Law. To Man the whole of *li* has been granted; animals have only dimmed and partial glimpses of it. Even in man *hsing* (jap. *sei*), "original nature", is habitually

clouded, enveloped by its second nature which is called *kishitsu* because its character is determined by different states of *k'i*, the principle of actual, imperfect, sensual existence; it occurs in various degrees of condensation or rarefaction, like Air, the rarefied states being the more valuable because they are more transparent.

The task of man is to subordinate the coarser elements of his second nature to *li* thereby restoring its original nature, which is good, and which cannot be altered by its association with *k'i* which covers it like ashes hiding glowing embers. Morality consists in subduing selfish desires, represented by thickened *k'i*, so that *li* can shine with its original splendour and thus every being can be given its true place in the hierarchy of beings; to find this place means to develop its true essence, in Stoic language: to play its role in the well-ordered universe; in the sphere of social life such places and roles are circumscribed by the Five Moral Relations of Han-Confucianism.

It is easy to see how this system, an archaizing conformism, as Professor Granet has called it (*La Pensée Chinoise*, p. 585), must have recommended itself to the rulers and advisors of the Tokugawa Shogunate. The system promised to inculcate discipline, austerity, firmness and resignation, virtues indispensable in a stationary society, and it seemed moreover to represent the greatest common factor of Confucianism, Buddhism (especially that of the Zen-sect which had done most to introduce the Tei-shu school to Japan), and *Shintō* in its higher esoteric doctrines. But although it remained the official philosophy of the Shogunate until the downfall of this institution in 1868, the system was violently opposed as early as in the seventeenth century by schools of independent thinkers, some of whom exercised great influence and finally helped to destroy the moral and political basis of the Shogunate.

Few of these heterodox thinkers deviated from Confucian ethics and for every one of them there had been a predecessor in Chinese thought, but the great vitality of these movements

goes far to show that they expressed genuine characteristics of Japanese thought and feeling. It is customary to classify them as *ko-gakusha* (the Old School), the Intuitionist Schools, and the *koku-gakusha*, the National School.

Only the last discarded Chinese ethics altogether, holding that the Japanese, a race descended from the gods and ruled over by a manifest god, stand in no need of ethical reasoning. Moral philosophy is here considered as a sign of corruption arising in nations ruled over by tyrants who want to disguise their arbitrary authority by utilizing high-sounding theories. As Japan has from the beginning been living under a dynasty of divine monarchs in an unbroken line of succession, she needs only to consult her mythical records and to obey whatever command is given by its Heavenly Ruler—at that time a revolutionary doctrine, for actual power was then not wielded by the Emperor but by the Feudal Suzerain, his ostensible substitute.

The most influential exponent of this school was the eighteenth century philologist Motoori Norinaga, a very learned and sagacious interpreter of archaic Japanese literature, with a fine feeling for what is genuinely Japanese, but singularly impervious to logic outside the sphere of philology and fanatically unjust whenever speaking on anything not purely Japanese. With all his great erudition he failed to see that the theocratical ideas he held forth had only their mythological roots in the Japanese past; their theoretical elaboration had been borrowed from the official Confucianist philosophy of the Han Dynasty, including the dogma that the Emperor may be good or bad but must be obeyed in any case. With his bland indifference to logical consistency he failed also to draw the right inferences from the patent fact that the introduction and cultivation of Confucianism and Buddhism on Japanese soil had been due to the initiative and to the support of Japanese Emperors who, according to Motoori's own doctrine, being gods must be obeyed without hesitation and argument—a strange Far Eastern counterpart of the Greek paradox concerning

Epimenides the Cretan and its modern mathematical sequels in the higher theory of infinite collections.

Motoori was certainly right in denouncing the recent and vague identifications of Confucian philosophy and Japanese mythology. But if he had applied his critical acumen to contemporary literature he would have been forced to admit that the heterodox Confucianists of his country were as much representative of the Japanese Spirit as his own school. He thus reminds us of those German romanticists who unlike the great Herder, Motoori's contemporary, decried every poet or thinker or artist who looked over Germany's border to Greece and Italy as *undeutsch* whereas there have been no truer Germans than those south-bound followers of Winckelmann.

Among the heterodox Confucianist schools the *ko-gakusha* opposed the Tei-shū School with the battle-cry "Back to Confucius!" Unlike the Chinese movement of similar name and date this was not a philological affair but an attempt to free Confucian ethics from crypto-Buddhist metaphysics and moods; to vindicate the right of action against the superiority of contemplation; and to eliminate every trace of Manichæan dualism. Such tendencies were certainly more in the spirit of the Master than those of the orthodoxy, but they meant also a reassertion of the Japanese aversion against everything purely or supremely speculative, as well as against any theory that implies the existence of a fissure in the nature of man. The most representative figure of this school is probably Itō Jinsai, a private teacher of great influence. To him *hsing*, the original nature of man, is not a cosmological principle but the anthropological character of empirical man; *li* is simply human reason: the only principle of reality is *k'i* which issues from a source of cosmic energy, *gen-ki*, "Urkraft", a kind of forerunner of the *élan vital*. In order to be virtuous it is not necessary to subdue part of one's nature. There is in man an instinctive disposition to goodness which only needs to be tended. Good and evil can be discriminated by an instinct-like feeling. On the other hand it is not enough

to overcome passion, as the Orthodox school taught; the mind must be disciplined by habits and education. Virtue lives in the concrete particular act; there is no Cosmic Way written with capital letters.

Kaibara Ekken, a physician who followed the Ming philosopher Rasei-an, a writer of great serenity and persuasive charm, still widely read and admired, went one step further; he identified *li* and *k'i*, and developed an ethics of pure feeling leading to contentment not by resignation but by enjoying unadulterated and desire-free pleasure (in a way vaguely reminiscent of certain passages in Plato's *Philebus*).

With the exception of Ōgyū Sorai, a follower of the last eminent pre-Ch'in Confucianist Hsün Tze, all these thinkers postulate the original goodness of man, an emotional axiom dear to the Japanese up to this day; like many others they seem not to feel sure of their capacity to do good if they cannot rely on an unchangeable substance in man on which he can fall back if in doubt and trouble.

There is one notable exception to this rule: the numerous adherents of Hōnen and Shinran, founders of the most popular sects of Japanese Buddhism, believe in the abject sinfulness of man which makes him unable to attain salvation by his own efforts. However, everybody can be saved who invokes the name of Amida Buddha, the Lord of Infinite Light, a legendary monk of princely birth who had refused to enter Nirvana as long as any other being remained unredeemed. Such saviours naturally take a greater interest in sinners than in the just; the original idea of Hōnen that even a sinner can be saved, was thus turned by Shinran into the paradox that even a just man is capable of salvation. Hence a certain tendency to encourage men and women to indulge without scruples in their desires and passions, this being the surest way to move the grace of Amida. There is a deep religious meaning in such a belief in light springing up in darkness when it is darkest and in the related conviction that only a soul fervent in transgression may have enough ardour to attain greatness in virtue. The effect of such

doctrines on the average man in his daily conduct, however, is surprisingly similar to that which may be expected from those who hold the opposite opinion on the nature of man. It thus has come about that not only great erotic freedom but also participation in, or sufferance of, super-nationalist and militarist policies could be urged by Shinshū Buddhists as well as *Shintō* fanatics.

Among Confucianists, orthodox or heterodox, only Ōgyū Sorai held that human nature is originally indifferent; it must be fashioned into something good by ritual and art, or rather ceremonial and music fashioned to this end by Superior Men who know the Will of Heaven—of whom there are always only a few. Ōgyū Sorai was a man of wide experience and clever judgment whose advice was held by the Shōgun in great esteem; but he was regarded by most of his contemporaries as a queer original rather than as a sage. The Japanese do not like the pure light of unimpassioned truth relentlessly pursued. They follow only where a chord of sympathy vibrates, and like most Orientals they are apprehensive lest the statement that man is not good, either in general or in any particular case, may lead to men becoming really bad.

The member of the *ko-gakusha* best known in the West is Yamaga Sōkō, the teacher of the leader of the Thirty-seven Ronin, a teacher of military science who systematized the moral code of the warrior class, *shi-do*, later called *bushido*, a slowly growing code the origins of which date from the thirteenth century, perhaps the most Japanese of all Japanese creations, an attempt to shape the life of a warrior class by infusing it with the spirit of Zen-Buddhism and Confucianist morality, first in a mystic and sacrificial, more and more in a utilitarian, and finally in a nationalistic spirit.

It is only natural that in the moral code of a soldier bound to his lord by feudal allegiance, the virtue of loyalty should occupy a central position, and it has become customary among Japanese writers to regard it as the *differentia specifica* of Japanese ethics that for them in a case of con-

flicting duties loyalty takes precedence over filial piety. In the writings of the *ko-gakusha* this axiom is as little stressed as its converse had been in the Analects of Confucius. The main problem of the Tokugawa Period was to decide whether loyalty is due to the Baron (and his overlord, the Shōgun) or directly to the Emperor. The fanatical fervour of the Emperor-loyalty of modern Japanese, although deeply rooted in age-old Japanese traditions, draws most of its force from the fierceness of this struggle against more clannish loyalties.

The only Tokugawa writer who subordinated loyalty to the demands of filial piety was Nakae Tōju, one of the most moving figures of Japanese history, the son of a peasant who had been adopted into a samurai family on account of his intellectual faculties, but who, inspired by a Chinese classic, the Canon of Filial Piety, relinquished his samurai service in order to assist his ageing mother. In his mature writings he follows the Chinese Ming philosopher and soldier-administrator Wang Yang-ming (jap. Ōyōmei), a contemporary of Spinoza, who discarding all natural philosophy, and estimating tradition less than introspection and intuition, held that truth is inward in man and can be attained through spiritual exercises in which the divine Ground of the soul, *ryō-chi*, "Prime Conscience", is set free in a process of internal purification. There is only one virtue, viz. filial piety, not conceived as a mere social duty but as an expression of gratitude towards the one source of all being, the cosmic soul which to Nakae Tōju is the real father of every creature. It is possible that this note of ethical and emotional monotheism was an echo of Western ideas; it is reported that Tōju had once had contacts with a Christian. But the metaphysical framework of his teaching remains that of Chinese tradition enlivened by a fresh and personal moral sentiment. "As our bodies are derived from our parents and yet one with them, so are their spirits derived from the Spirit of Heaven and Earth, and the Spirit of Heaven and Earth is the offspring of the Universe; then my body is one with the universe and the gods. Clearly perceiving this way and acting in accord with it is

obedience to the Way. This obedience is like the Great Sea, and the various relationships are like vessels with which we dip out the water. As the vessel is big or small, round or square, so the water appears, but it is all alike the water of the great sea." (Tr. by Galen Fisher, *T.A.S.J.*, 1908.) Every act centripetal to *ryō-chi* is good, every act centrifugal to it bad. The stages of the cultivation of morality are, in ascending order: aspiration, enlightenment, self-mastery, perseverance, independence of others' opinions, repentance, filial piety, loyalty (which is really a part of it), humility, patience, the worship of gods and spirits. Repentance must not last too long: when we recall our misdeeds after experiencing a change of heart, they should seem unrelated to us. But "if our misdeed rouses a sense of shame, the root of our misdeeds is still hidden in us".

The activist attitude we found in the *ko-gakusha* is here still more marked. Thought and action are, according to Wang Yang-ming, inseparable. "Thought is incipient action." "To rest even in the attainment of the highest virtue", a famous Chinese formula, would be joyless. Nakae Tōju was no reformer. He acknowledged the order of the society of his time as decreed by Heaven, but by giving man a direct approach to the Absolute and urging him to harbour indomitable aspiration towards re-union with the Spirit of the Universe, he kindled a new fire in less quietist minds. From these disciples have come the very few revolutionaries Tokugawa Japan has produced, men impatient with social oppression and full of active sympathy with the suffering poor. Tōju, who taught the equality of men, not only within the Five Classes of Japan from the Emperor to the Commoner, but of "whosoever bears the human form", and who had in his life-time been a force of what a recent philosopher has called "radiative virtue", is still a name to conjure with among young Japanese, as is that of Wang Yang-ming in contemporary China.

The final overthrow of the Tokugawa Shogunate was the resultant of many forces, political, social, economic, intel-

lectual and moral, yet the deepest inspiration came from the *kokugakusha*, unwittingly true to Machiavelli's insight that in times of crisis states can only be saved by bending back to the source from which they emanated, *ritornando al segno*. But in one important respect Motoori, the zealous hater of everything Chinese, failed to carry victory. When the Emperor was restored to power it was one of his most signal acts to issue the Rescript on Education in 1890, a document probably written by his teacher Baron Motoda, a distinguished Confucianist, in order to give a firm orientation to the moral life of the renewed state. This Rescript was read every year at a solemn ceremony in every school; it was held in quasi-religious veneration, like all Rescripts, which have almost oracular authority. The Meiji Emperor is said to have been dismayed by the jejune, utilitarian and naturalistic character of the new teaching in Tokyo Imperial University and other places of modern education hastily built up after the Western pattern; conditions which, he thought, must lead to moral anarchy and endanger the continuity of the State. Reading Japanese literature of the Meiji Period and beyond, and observing the attitudes of Japanese when neither bound by their ancient traditions nor able to find a new moral stability in the intellectual and moral turmoil caused by the haphazard importation of every conceivable trend of foreign thought, I for one cannot but admire his foresight.

During half a century the Rescript has fulfilled its stabilizing function but it has not prevented, nor had it been devised to prevent, the process of assimilation of foreign thought. The new situation was in one respect very similar to that of the formative stage of Japanese civilization. Again every new ethical conception was of alien origin, but while archaic Japan had enjoyed the good fortune of encountering the brilliant and stable T'ang Civilization, a rich but harmonious synthesis of many Oriental elements, it was now confronted with an amorphous aggregate of foreign civilizations all in crisis, morally, socially and politically. The more daring and curious minds of Japan opened themselves passionately

and tenaciously to every element of this world in progressive disorder: Rousseau and John Stuart Mill, Darwin and Marx, William James and Henri Bergson, Tolstoi and Nietzsche, Herbert Spencer and T. H. Green, Christian Socialists, German idealists and the various Neo-Kantian schools, Pragmatists and Phenomenologists were eagerly introduced, patiently studied and slowly assimilated.

No new ethical idea has emerged out of this chaos. Only one generation ago the first tender shoots of original thought seemed to begin to sprout; but even then the most valuable work was little more than a re-statement of foreign ways of thought, mostly on Fichtean and Hegelian lines, tinged by the moods and couched in terms of Buddhist philosophy, proceeding not by analysis but by introspection and ending not in system-building but in meditation.

The Japanese are not a race of pioneers, path-breakers and innovators; they have so far put little trust in bold generalizations and in proud self-sufficing thought. During all their history they have been concerned more with the Here and Now, with the particular and with what Poseidonius called the *idia*; with the task of adapting theories to a concrete situation; with the effort to make truth livable and to keep it close to feeling—which the most respected of contemporary Japanese philosophers, the late Professor Nishida Kitarō, has called “the apriori of all aprioris”. It is not likely that it will be ever different in Japan, which is first and last a nation of artists worshipping the beauty of transience.

SCIENTIFIC METHOD IN TEXTUAL CRITICISM.¹

By JOHN MACKIE.

TEXTUAL CRITICISM is important mainly as an adjunct to certain literary and historical sciences: it is one of the agencies that provide them with their materials. But it is also a science itself, an historical science, and it has its own principles and techniques which may be compared with those of other historical sciences and of other sciences in general. I intend to discuss its methods in a way which will throw light on the general problems of scientific method. I shall not, therefore, be concerned very much with the detailed techniques used in textual criticism, which indeed vary so much from one field to another that one must discuss separately the techniques appropriate to criticism of classical Greek texts, of the texts of Elizabethan drama, and so on, but shall consider rather the methods of most general application and the principles on which they are based. I shall begin with a fairly brief and dogmatic account of what I take to be the purpose of textual criticism and the main outlines of its method, and then discuss some difficulties, some conflicting views, and such conclusions as appear to be of philosophical importance.

The Purpose of Textual Criticism.

Textual criticism exists because texts are faulty. This is shown partly by the disagreements between manuscripts, when we possess several manuscripts of the same work, and partly by the unsatisfactory character of the transmitted readings. It is what we should expect in view of the way in

¹The conclusions here stated are based largely on a consideration of views and examples given in the following works, to which reference is made in the course of the article:

L. Havet: *Manuel de Critique Verbale*.

W. W. Greg: *The Calculus of Variants*.

A. E. Housman: *M. Manili Astronomicon, Liber Primus*.

which texts have been transmitted, by repeated processes of copying from one manuscript to another. The purpose of textual criticism is to discover what the author wrote, or, since we can in some cases correct an author's slip of the pen, what he intended to write. But its purpose is not to state what the author ought to have written: it is not to produce a better text by correcting the author's errors of fact, style or grammar. Of course an editor, or other person engaged in criticism, will in general have purposes other than this: he may be concerned to produce a readable text, to protect the author from misinterpretation, to exhibit his own brilliance, and so on: but these are all irrelevant to criticism as such. Since what the author wrote cannot in general be determined with certainty, one is usually content to say, such and such is most likely to have been the original reading. In arriving at this conclusion, the chief evidence used is of course the readings of surviving manuscripts or printed texts, but, as I shall argue, one also uses a great deal of other knowledge, including one's general knowledge of the language, history, thought, etc., of the period at which the author wrote, and of the history of the transmission of the text between the author's time and one's own, including the habits and behaviour of scribes and others concerned in that transmission: to all of these one's knowledge of human and social behaviour in general makes some contribution.

Method in the Case of One Manuscript.

The methods used in criticism vary with the number of surviving manuscripts of the text concerned. Consider first the case where only one manuscript survives. At places where the reading of this manuscript is satisfactory, that is to say, where it makes good sense and grammar, is consistent with what we know of the verse metre or prose rhythm of the author, in short where it is what the author is likely to have written, we shall in general accept it. But if in some such respect it is unsatisfactory, we may consider a correction or emendation. A satisfactory

correction is one which is the sort of thing the author would have written, making good sense, etc., and which is likely to have been corrupted, by errors of the sorts which scribes usually or easily make, into the manuscript reading. Here it is usual to speak of intrinsic probability and transcriptional probability: a reading is intrinsically probable if it is what the author is likely to have written, and it is transcriptionally probable if it is likely to have produced, through a series of acts of copying, the manuscript reading. Clearly the manuscript reading has itself far greater transcriptional probability than any other, but since certain readings could have been corrupted into it, they have some transcriptional probability. In effect, then, we weigh together the intrinsic and transcriptional probabilities of the manuscript readings and any suggested alternatives, and choose that which is the most likely on the whole. This process cannot be made mathematically precise, because such probabilities cannot be exactly measured: but what we do may be illustrated by saying that if they could be measured, we should multiply together the intrinsic and transcriptional probabilities for each of the rival candidates, and accept that candidate for which the product of the two is greatest.

An example of this procedure is offered by a passage in Virgil's *Georgics* (Book I, lines 137-8), where an old manuscript reads:

Navita tum stellis numeros et nomina fecit
pifiadas Hyadas claramque Lycaonis Arcton.

Now *pifiadas* is an unknown word, which makes no sense. It has therefore a very low intrinsic probability. The obvious correction is *Pleiadas*: this is metrically correct, and we have reason to believe that Virgil was acquainted with the Pleiades and would be likely to speak of them here in a list of constellations: it therefore has a high intrinsic probability. Besides, we know that at one time Latin manuscripts were written in capitals: at that time LE could be easily mistaken for IF: therefore *Pleiadas* has a fairly high transcriptional probability. No other equally satisfactory solution is sug-

gested, so *Pleiadas* is adopted as the correct reading. (In fact this is not our only manuscript, but if it had been, the procedure would have been as described.)

Now intrinsic probability depends upon accepted views in a number of fields, for example that certain rules of grammar or metre were always or nearly always observed by the author, that he favoured a certain style, and so on. Perhaps some of these views can be stated as universal propositions, for example, that Cicero never put the object of a verb in the nominative case, some as statistical laws, for example that Cicero usually avoided such a rhythm as *āntē praedicārē* at the end of a sentence, while others can hardly be stated as laws at all: it is a matter of literary judgment that such and such a passage is foreign to Cicero's style, and so on. But whatever their logical character, these views have the status only of confirmed hypotheses: they are never certain. A special difficulty is that the solution of the very problem that we use such an hypothesis to solve, namely the correction of a certain passage, is relevant as confirming, weakening, or disproving the hypothesis itself. When *ante praedicare* occurs (*Cato Major*, §49) we can either rely on the metrical law and regard this as a faulty reading or accept the reading and say that the law is statistical only, not universal. The task of textual criticism would be easier if it could work with ready-made bodies of knowledge about grammar, metre, history and the rest, constructed by the experts in those fields; but this is impossible, for these sciences must rely upon texts corrected by the critics, not simply on the manuscripts: that is, they must use the conclusions of textual criticism, just as textual criticism uses their conclusions (c.f. Havet, p. xiii). We shall discuss later this apparent circularity of argument. But we may note here that the probability in intrinsic probability is of two kinds: a reading may be improbable because it is contrary to a universal law which is itself only probable, being a confirmed hypothesis, or it may be improbable because it is an instance of something that is said to be very rare by a statistical law (itself, of course, also a confirmed hypothesis).

Transcriptional probability, too, depends on accepted views of the kinds of error usually made by scribes, or the kinds of injury that may be suffered by manuscripts. These will depend, in any particular case, on the history of the text, how often it has been copied, what scripts and what materials were used, whether the scribes were learned or ignorant, and so on. Manuals of textual criticism devote most of their space to a detailed account of these factors as they apply to some group of texts. Errors may be divided into those which are caused by some previous error in the same passage, and those which occur in a previously correct text. The former kind are usually attempts to make sense of a passage by emendation; the latter show a great variety of causes and character. Some of the commonest types are those due to mechanical injury of the exemplar, to misreading of letters or words, to the omission of letters or words or lines, especially where similar groups of letters occur and the eye jumps from one to the other (*homoeoteleuton*), to the repetition of letters or words or lines (*dittography*), to the incorporation of marginal notes in the text, and to the failure of a scribe to understand the sense, grammar, or metre of the original.

It is very difficult to compare the relative probability of alternative transcriptions, yet we do so in fact: we are not satisfied merely to show that some process of corruption is possible, that it could have occurred by steps in accordance with the accepted types of error: we reject one such theory as less likely, more far-fetched, than another. Now the facts we are using here are clearly statistical laws, of a very rough sort, about the behaviour of scribes: they arise from our incomplete knowledge of the individual cases. The laws that we formulate do not constitute a complete theory of error, even of errors in copying: as Freud has shown, such processes as the misreading of similar words are mechanisms used by some motive, often unconscious, and the full explanation of any error would involve an account of the determining motive or motives. But we cannot, in general, psychoanalyze a long-dead scribe. The motives are lost, but the mechanisms, being

common and repeatedly used, form the basis of statistical laws. Thus we might say that Γ is confused with T more frequently than with Σ , though the latter confusion occurs. However, in using these laws, we consider the particular cases: we try to observe the peculiarities of a particular scribe or manuscript, and having found one sort of error in several places in it, we expect similar errors in other places: we try to follow the scribe's mental processes, seeing how some line of thought, some echo of a previous passage, has helped him to make a particular mistake in reading: we do not attempt to make our methods precise by statistical accuracy, say by counting all the cases where Γ has been changed to T and so assigning a certain numerical likelihood to this change, and so on.

We have spoken of comparing the manuscript reading, in respect of overall probability, with various alternatives. These are conjectures, our own or someone else's. Even when we have decided what is wrong with the manuscript reading, and have in mind the probable processes of corruption, we cannot in general deduce from this evidence what the correct reading must have been: perhaps the evidence suggests an emendation, but this is a process which cannot be formalized further than to say that the evidence restricts our thought to a certain range: Housman, commenting on Juvenal, XIII, 179,

invidiosa dabit minimus solacia sanguis,

rejects *minimus* as inappropriate, and then has the problem of finding a word whose metrical form is $\cup \cup -$ or $--$, which begins with a consonant, which could easily have dropped out or been corrupted into *minimus*, and which makes a sense of which the scholiast could say "*nihil inde lucri habebis nisi invidiosam defensionem*". The solution is *solum*, meaning the same as *nihil . . . nisi*, easily absorbed into *solacia* (Housman *Manilius*, volume I, pp. lxxv-lxxvi).

But though the evidence may thus restrict one's thought to a certain range, within that range one merely guesses at solutions: this is a non-logical process, and the method by

which we arrive at solutions is irrelevant to a consideration of their value.

Method in the Case of Several Manuscripts.

We come next to the methods used when several manuscripts survive of a single work. Here the procedure falls, in general, into three stages, which are in practice not completely separable. In the first stage, the manuscripts are arranged, if possible, in a stemma, or family tree, in the second the readings of the archetype are determined, that is, of the latest common ancestor of the whole group (which may be the original, the author's manuscript, in rare cases, and which may be one of the surviving manuscripts, if it can be shown to be the ancestor of all the others), and in the third stage these archetype readings (if the archetype is not itself the original) are used in the same way in which the readings of a single surviving manuscript would be used to determine the readings of the original. However, there are some cases in which no clear stemma can be established, and in these we work directly from the many manuscripts in much the same way as we did from the one.

In establishing a stemma we cannot rely merely on the similarity between manuscripts as a criterion of close relationship, even if we make this precise in a statistical manner by counting agreements and disagreements. Nor can we deduce a stemma from a formula stating the ways in which variants are grouped among manuscripts. Here again the method is hypothetical. We must guess at the relationship between the manuscripts, and confirm or weaken or disprove our guess by seeing how well it explains the whole array of extant readings. This guessing, where there is any considerable number of manuscripts, would be extremely difficult, if there were not certain principles to guide it into a restricted range of possibilities: these principles are sometimes taken to constitute the method of this branch of textual criticism, but as we shall see they cannot in fact be stated in a form which is both true and useful. They are methods of induction,

analogous to Mill's four methods, that is, they help us to make likely guesses, but they do not prove or confirm the results. Proof is in general impossible, and confirmation is given not by agreement with the inductive methods but by the success of the hypothesis in explaining all the facts.

There are three basic principles. First, that in a text of any considerable length every act of transcription introduces some errors, not all of which occur at places already corrupt. Second, that of the already corrupt passages in an exemplar, some are reproduced in the copy and some are further altered, but in very few is the original reading restored by correct emendation. Third, that two scribes rarely make the same mistake in the same passage independently. The second and third are commonly called "the improbability of correct emendation" and "the improbability of coincident error".

From these principles it follows that if a manuscript A is descended from a manuscript B (a possibility which arises only if the types of script used show that A is not earlier than B in date), there will be errors in A at all, or very nearly all, the places where there are errors in B, that these will be either the same as the corresponding errors in B or easily derived from them in accordance with transcriptional probability, and that there will also be errors in A at some places where B is correct. Further, it follows that these relations will hold only if A is descended from B: in all other cases there will be some places where A is correct and B is in error, so that where we find these relations, or something approximating to them, we can decide that A is in fact descended from B. We may call this "the principle of included error". In using this method, we must decide what are errors and what are original readings, relying upon intrinsic probability. In practice we shall not be able to do this at all doubtful passages (and if we could the task of criticism would be completed and the stemma of no practical value), but if, after examining a number of passages in which we can determine correctness and error with a high degree of probability, we find that "included error" occurs, we shall formulate the

hypothesis of descent. In practice, too, we shall probably meet some apparent exceptions: we shall have to decide whether these are best explained as errors, however plausible, in A, or as instances of correct emendation, or as genuine exceptions which overthrow the hypothesis of descent: in this last case the favourable instances previously found constitute a problem for which a solution has still to be discovered. In other words, the principle of included error cannot be mechanically applied: it suggests an hypothesis, but in the end we must choose between this and alternative hypotheses by seeing how well they explain all the divergent or faulty readings.

When manuscripts descended from other surviving manuscripts have been placed, it remains to determine the relationship of collateral manuscripts. Here the principle of the improbability of coincident error indicates that when two or more manuscripts share the same errors in a number of places, they are descended from a common ancestor in which those errors were introduced: and that any other manuscript which has correct readings in those places, or readings likely to have been derived from the correct reading without passing, as an intermediate stage, through the errors common to the co-ancestral group, is not descended from this common ancestor. This is the well-known rule that agreement in error proves affinity: but again it must be used with caution. Common errors of certain sorts may arise in manuscripts not closely related, for example if their scribes share certain traditions of orthography. Again this is a useful method for forming hypotheses, but the hypotheses must be confirmed in detail.

An example of this method is given by Havet (§1600-1609) from the manuscripts of Terence, which are eight in number, called ADGVCEFP. At Adelphoe line 32 DGV read *dixit*, the others *dicat*. The sense and a neighbouring verb *cogitat*, which metre forbids us to change to *cogitavit*, require the present tense *dicat*. Then *dixit* is an error shared by DGV: then DGV have a common ancestor, from which none of the

other manuscripts is descended. At Adelphoe line 432, ADGV have *reposcere illum est quem dedisti*, CEFV have *est illum*, which is metrically impossible, but is a fairly easy corruption because it helps the understanding by putting the antecedent *illum* next to its relative pronoun *quem*. Then *illum est* is correct, *est illum* is an error shared by CEFV, which have therefore an exclusive common ancestor. We frame the hypothesis that the stemma is that shown in figure (i), which may be further developed by determining the internal relationships in the groups descended from x and y. If the evidence of further passages agrees with this stemma, and if any apparent exceptions (such as an agreement of DCE against AGVFP) can be easily explained (say as an error readily made independently by the scribes of D and an exclusive common ancestor of CE), we should regard this hypothesis as confirmed.

One difficulty may be mentioned here: in deciding that *est illum* is wrong and *illum est* right, we have relied on the fact that the former is an easy corruption of the latter: this has given transcriptional probability to *illum est* even from the evidence of CEFV. But if this is an easy corruption, it could have been made independently by each of C, E, F, P, so that the very transcriptional probability which confirms our premise (that *illum est* is correct) weakens the argument by which we obtain the conclusion (that CEFV have an exclusive common ancestor). But this objection is unsound. Intrinsic probability, based on the laws of metre, weighs heavily against *est illum*: if this is an error, its chance of occurring in transcription is always less than that of the correct reading, and its chance of occurring four times independently is much less than its chance of occurring once (c.f. Greg, p. 20, footnote).

By a repeated use of these methods it is possible to arrive at and confirm an hypothesis as to the stemma of the manuscripts of many texts. But in using these methods we are also formulating and confirming hypotheses as to the readings of the archetype and as to the correct or original readings.

That is why I said that the three stages outlined above could not be completely separated in practice.

The second of these stages is concerned with the determination of archetype readings. We first eliminate manuscripts which are descended from ancestors which themselves survive: for the readings of such descendants have no independent bearing on the original reading. These readings may be correct in one or two cases where the reading of the ancestor is wrong, but only as a result of a happy emendation: we may use them as conjectures, that is all. This elimination of descendants is merely the converse of the principle of included error. If we had used this principle as a method of proving the stemma, we should have already determined the correctness or error of all the disputed readings, and in now using the stemma to determine the correct readings, we should be guilty of a circular argument. That is to say, if the stemma were *proved* by the principle of included error, it would be useless. But since this principle has been used only to suggest an hypothesis about the descent, with which are connected, by relations of mutual confirmation, a large number of hypotheses about correct readings and processes of corruption, and since we are confirming this network of hypotheses against alternative networks by a detailed consideration of many passages, no circularity does in fact arise.

After the elimination of descendants, we eliminate the readings of manuscripts placed as B is in the stemma of figure (ii)^a in places where A and C agree, unless we think that A and C agree in arriving independently at an easy error. In effect, we are thus establishing the reading of the lost archetype x, by using the principle of the improbability of coincident error. Of course we are using it in the reverse of the way in which we used it to establish the stemma, and if we had regarded this as a method of proof, we should be now guilty of the same sort of circularity as that discussed

^a In all these diagrams extant manuscripts are represented by capitals, lost ("inferential") manuscripts by small letters.

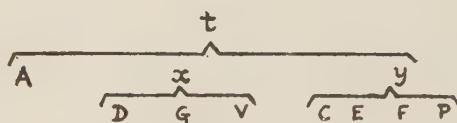


fig. (i)

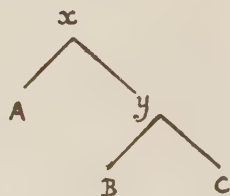


fig. (ii)



fig. (iii)

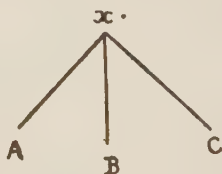


fig. (iv)

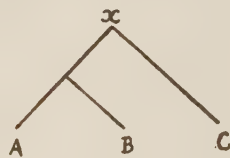


fig. (v)

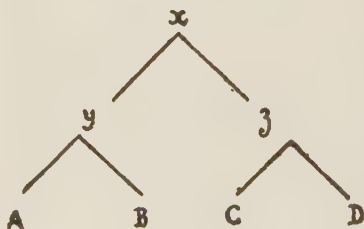


fig. (vi)

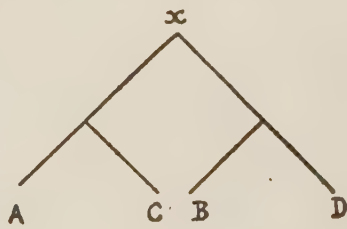


fig. (vii)

above in connection with included error. Again, since the method is really hypothetical, it is proof against this criticism.

After eliminating descendants and establishing archetype or sub-archetype readings by agreement, we shall be left with many passages where with stemmas of such forms as are shown in figures (ii), (iii) and (iv) all the manuscripts disagree. The principles used in all these cases are shown by the simplest case (figure (iii)) as well as by the more complicated ones. Here it is plain that we rely simply on intrinsic and transcriptional probability. The readings of both A and B, though different, have in general a higher transcriptional probability than any conjecture: if their intrinsic probability is equal, we prefer that which could more easily be corrupted into the other. But if neither could easily have changed into the other (even through intermediate stages) and if a conjecture of high intrinsic probability could easily have changed into these two by divergent error, it may be adopted. This is simply to say that we again accept the hypothesis which agrees best with the manuscript evidence, the laws of transcriptional probability, and the laws or tendencies on which intrinsic probability depends.

The third stage, as already stated, consists in working back from archetype readings to the original reading by the methods described in the correction of a text preserved in a single manuscript.

These three stages together constitute what is called the genealogical method. But there are cases in which this method breaks down. It may happen that a manuscript is descended not from a single exemplar, but from two or more, if it has been copied from one and corrected from another, or copied in different places from different exemplars, or if the scribe worked as a modern editor does, from several exemplars at once. This conflation or contamination, if it affects only one manuscript of a group, may be revealed by contradictory results obtained in the attempt to fit it into the family tree: the method then consists in assigning the different readings or different parts of one manuscript to different branches of

the family. In general, however, no useful conclusion can be drawn from conflated manuscripts by the genealogical method. This is particularly evident when all or most of the extant manuscripts are the result of conflation: they have no simple ancestry, but are the offspring of a series of promiscuous marriages throughout the line of descent. This is most likely to occur in periods of flourishing culture, when at any time many manuscripts of a particular work are available. In these cases the genealogical method cannot be used at all: one must work from all the manuscripts together, using the principles of intrinsic and transcriptional probability.

This completes the sketch of what I regard as the correct methods of textual criticism: we have next to consider some difficulties and disagreements.

Circularities of Argument.

The first of these concerns the apparent circularity of argument which we have noticed at several points. We use the products of textual criticism, namely corrected texts, as the evidence for our views of ancient history, of classical grammar, style, and metre, and so on, but we use the conclusions already reached about history, grammar, style, metre and the rest in the work of textual criticism. We use a family tree of manuscripts to determine archetype readings and eventually to decide what were the original readings: but in establishing this family tree we have had to decide what readings were archetypal or original. Various ways of removing these circularities have been suggested. Havet, for example, argues that the result of textual criticism is purely negative: it locates faults, and so prevents one from being misled about history, grammar, etc. The restored readings are not themselves evidence for these sciences: we are led to make such restorations in order to confirm the presence of a fault by understanding how it arose, but this is a mere addition to the central task of criticism. To this view there are several replies. In the first place, scholars do in fact use restored readings as evidence for other studies. Secondly, a restoration explains

the error only if it is true, if the restored reading was in fact the original one: and if so, it is evidence. Finally, Havet's view does not avoid circularity: in the *ante praedicare* example given above, this reading, if not already taken to be faulty, is evidence against the metrical law that declares it to be a fault. In other words, the negative use of criticism involves circularity as much as the positive use. Havet endeavours to meet this last objection by introducing a principle which is almost equivalent to the assertion that what appears to happen rarely in fact never happens at all. If a certain rhythm occurs rarely in our manuscripts of Cicero, we can infer that it occurred never in his original writings. But this principle is quite unscientific: it is merely the expression of a love for rigid laws. But whether Cicero observed any rigid laws about rhythm is a question which textual criticism must help to investigate: it cannot assume the answer in advance.

A way of avoiding the second sort of circularity mentioned above is the "calculus of variants" proposed by Greg. He tries to develop a method of establishing the stemma of a group of manuscripts from the simple relations of agreement and disagreement in reading, without deciding which readings are correct and which are errors. But he has to admit that this method produces indeterminate results: it ends in ambiguities which can be resolved only by the methods we have already described.

It may be argued that the circularities to which we have drawn attention are more apparent than real. We can decide what were the rules of Latin grammar or the main facts of ancient history without examining every passage on which they bear, and though a restored passage may be used as evidence about history, for example, it will not be used to establish the particular facts used in its restoration. Similarly a stemma may be established by consideration of passages where intrinsic probability leaves no real doubt about the original reading, and is then used to determine readings in other places. This account is perhaps a true description of

our actual procedure, but it is not logically precise. If we arrive at grammatical rules by ignoring apparent exceptions, the rules may have to be abandoned or modified later: they cannot be regarded as confirmed as long as there are instances which, until they are emended, contradict the rules. Consideration of the principle of included error, for example, will lead to the same conclusion in the genealogical field. In other words, as long as we insist on taking propositions one by one, and on trying to show them to be confirmed or proved in a certain order, we cannot avoid circularities of argument.

As already indicated, the solution of this difficulty lies in the fact that we confirm, in the end, not single hypotheses, but networks of hypotheses. Of course we do not start with all the evidence neatly laid out before us and propose a collection of hypotheses to account for it. At any stage in investigation we have a certain body of knowledge, consisting of propositions about a great variety of matters which we believe to be true. In relation to them we form and confirm an hypothesis about the next problem that arises, say as to the reading in a certain passage. In doing this we may have to introduce further hypotheses about how a corruption occurred, about how a scribe's mind worked, and so on. In such cases we are "saving the hypotheses": we are introducing new hypotheses to reconcile the new evidence with the propositions previously accepted. The logical justification of this method is that we are using a network of hypotheses to explain a body of evidence, or, putting it the other way round, that the whole collection of evidence confirms this network of hypotheses. But because the logical structure is of this nature, a scientific revolution is always possible: a different network of hypotheses may be found more satisfactory than one already accepted. For example, we may have accepted the metrical rule forbidding such rhythms as *ante praedicare* and have corrected all apparent exceptions: in doing so we shall have adopted a number of hypotheses about particular readings and processes of corruption, and may have used these in turn to confirm some grammatical rule and to establish a certain

stemma for a group of manuscripts. If we find a number of convincing exceptions, we may reject the metrical rule, and then we shall probably abandon a number of the particular hypotheses and the other conclusions will be weakened and perhaps rejected in turn. As a result of the complexity of these networks of hypotheses, few hypotheses are open to direct disproof: the relation between hypothesis and evidence is one of weakening or confirmation only: an hypothesis is rejected not when it is simply disproved, but when its defence becomes too awkward. This type of situation is well known in the history of physical science: it is interesting to observe that it occurs in the field of textual criticism also, and for the same reasons. The apparent circularities of argument and the possibility of scientific revolutions occur in any science which uses this complex-hypothetical method.

From a slightly different point of view what we have discovered in the course of this discussion is the very great importance of background knowledge. Any attempt to limit the evidence bearing on any particular problem, in order to make the method of solving it more cut-and-dried, is misleading. Any investigation is made in the light of an indefinitely extended body of previous knowledge, which is taken as true, but not as certain, since any part of it may be called in question as a result of the present investigation. Once we realise this we can reject two well-known approaches to scientific method. One is the Cartesian approach, which begins by asking what propositions are certain and what can be established next in turn. The other is the suggestion that in order to solve any problem, we should assemble all the relevant evidence, viewing it impartially without any prejudices or presuppositions, and see what conclusions can be drawn from it or what hypotheses will cover it. We can in fact neither assemble evidence nor decide what is relevant to a given problem, nor survey the evidence, nor relate it to hypotheses and conclusions, without using presuppositions which are themselves open to question and which may be questioned in the course of this particular investigation. We

can never start at the beginning of a scientific enquiry nor can we complete one: we are always in the middle of things.

Some Prevalent Errors.

It is sometimes said that a stemma may be established by looser and more obvious methods than those described above; one merely observes a high degree of resemblance between certain manuscripts, and one can then assume that they form a sub-family, a genetic group. No doubt this method often works, and since all such methods are only ways of guessing at an hypothesis to be tested later, it is legitimate and harmless, provided that it is so tested. Nevertheless, it is as well to observe some of the kinds of error to which this method can lead. For example if the true stemma is that of figure (ii) and if *x* already included many faults and if *A*, *y* and *B* were carefully and fairly accurately copied, whereas *C* was carelessly copied and many changes introduced into it, *A* and *B* would resemble each other more closely than either would resemble *C*. Then the use of the criterion of resemblance would lead us to assert the stemma shown in figure (v), and any faults introduced in *y* and reproduced in *B* and *C* would be treated as archetype readings, while the possibly correct readings in *A* at these points would be denied authority. Another example is this: suppose the true stemma were as shown in figure (vi) and suppose that the scribes of *A* and *C* shared one tradition of spelling, etc., while those of *B* and *D* shared another. Then there would be a closer resemblance between *A* and *C*, *B* and *D*, than between *A* and *B*, *C* and *D*, if resemblance were measured by a simple counting of agreements: the stemma of figure (vii) would be indicated by the criterion of resemblance. Now this error would be revealed by the cases where *y* and *z* had introduced faults of a non-superficial character: we should have agreements between *A* and *B*, *C* and *D*, which would be very hard to explain on the basis of the stemma of figure (vii). Thus if we endeavour to understand the various readings in each disputed passage, we are fairly well insured against error. But if we place a

blind faith in statistics, as offering a precise and objective standard, we shall shut our eyes to these problems and accept the erroneous conclusion suggested by the relative degrees of resemblance.

Another statistically-flavoured view is that we can assign a certain degree of "merit" or "authority" to each manuscript. Greg suggests that this may be measured after a stemma has been established, by counting, for each manuscript, the number of passages where its reading is proved right or wrong. But suppose the stemma of a group of three manuscripts is that shown in figure (v). Then it is possible to prove, by agreements of A with C, that B's reading is not authentic, and by agreements of B with C that A's reading is not authentic, but no reading of C can be proved non-authentic by the use of the stemma. Thus C will be shown to have the highest merit, however bad it may really be! Again, if we have a stemma of the form shown in figure (iii), even if we decide that A contains far fewer faults than B, we cannot accept A's reading with any confidence in a particular passage where they disagree: we must rely, as already stated, on judgments of intrinsic and transcriptional probability, and if the two readings are intrinsically equiprobable, and B's reading could have been corrupted into A's more readily than vice versa, we shall ignore the measure of merit and accept B's reading.

A similar view is that the oldest manuscript is the best and that later manuscripts are inferior and that therefore their readings are to be ignored. This view includes some very instructive confusions. It is true that on the whole older manuscripts include fewer errors than later ones. From this it follows, on the ordinary theories of probability, that if we have no information about the manuscripts of a certain text other than their dates, we can say that the oldest probably contains the fewest errors. But in general we have other information: the genealogical method may establish that some later manuscripts are descendants of the earliest, in which case they are not just inferior, but may be eliminated. It may show that they are independent and then account must be

taken of their readings. It may well be the case that a later manuscript contains no more errors than an earlier one. This possibility can be excluded only on the basis of two false assumptions, that the number of acts of copying in any line of descent is proportional to its length in time, and that the number of errors introduced in each act of copying a text of given length is constant. And even when we have established the inferiority of one manuscript to another, in the sense discussed above, we cannot proceed to ignore its readings.

Greg's "Calculus of Variants".

Greg's "Calculus of Variants" has already been mentioned. It is a proposed method of establishing the stemma of a group of manuscripts on the basis of agreements and disagreements in reading alone, without decisions about the correctness of any readings. It claims, therefore, as far as it goes, to be precise and mathematical and certain. It consists of a symbolism by which the pattern of variants in each passage may be neatly recorded, and a calculus by which the stemma may be deduced from the collection of such variant patterns, in accordance with principles similar to those stated on page 60 above. The limitations of the method (of which Greg himself is well aware) are three in number. As already mentioned, the calculus yields indeterminate results: it restricts our choice to a group of possible stemmata, but does not decide which is the true one. In collecting variant patterns we must exclude those which are superficial (such as those due to different traditions of orthography, mentioned on page 70 above) and accept those which are genetically significant: but this is a matter of judgment, no more certain than decisions about the correctness of readings. Finally, the principles on which the calculus is based are not universally true: as we said, they cannot be stated in a form which is both true and useful, and Greg chooses a useful form. Greg's reply would perhaps be that he is introducing a deductive system, which has the same significance in textual criticism that Euclidean geometry is supposed to have in physical

science by those who regard it as a deductive system. His method, Greg might say, separates the certain from the merely probable stages of an investigation. It is only probable that a group of manuscripts obeys the postulates of his system and that the variants which he feeds into the calculus are genetically significant. It is only probable that a particular one of the set of stemmata which the calculus declares possible is the correct one. But it is certain that if the postulates are obeyed and the variants significant, the true stemma must be one of that set, and Greg may claim that it is an improvement in scientific method if we distinguish the certain from the merely probable steps.

Now we cannot discuss here whether the calculus is in fact "certain": it is plainly a branch of mathematics, and the view that it is certain stands or falls with the theory that mathematics in general is certain: the calculus will be a deductive system or an intuitive certainty or a complicated tautology or a set of empirical propositions, whichever mathematics as a whole turns out to be. Leaving this question aside, I should insist that we cannot really separate the mathematical from the merely probable stages of an enquiry in the way stated in our suggested defence of Greg. In practice, in textual criticism, we must continually work back and forth between various questions, whether such and such a variant is genetically significant, whether contamination has occurred between our manuscripts so that they no longer obey the postulates of Greg's deductive system, and what the line of descent is. We do not assemble all the evidence, attaching a measure of probability to each statement, and then apply to this assemblage a complicated but infallible calculus. A practical disadvantage of the use of Greg's calculus is that it would tend to give an illusion of certainty to conclusions which on Greg's own showing are merely probable: one would notice the certainty claimed for the calculating procedure itself and disregard the questionable character of its pre-suppositions and of the evidence fed in. This illusion of certainty is a characteristic feature of sciences which use mathe-

mathematical methods: in reading a textbook on physics or on pure economics it may be hard to detect at what points the observational material enters.

“Mechanical Procedures” *versus* “Judgment”.

It is sometimes disputed whether textual criticism is a field in which rigid laws and mechanical methods apply, or whether it is an art in which a kind of judgment, not to be reduced to precise rules of operation, plays a large part. In this dispute several issues are confused. In the first place, it has already been shown that conjecture is a non-logical process. Secondly, it has been shown, in connection with Greg’s calculus of variants, that mathematically rigid systems give little assistance in the establishment of a stemma: at all stages we rely on decisions about intrinsic and transcriptional probability. Thirdly, it has been pointed out that we have to weigh probabilities against each other, in determining which of a number of alternative hypotheses is to be preferred, and that neither the probabilities nor the process of weighing can be made mathematically precise. On the other hand, intrinsic and transcriptional probability depend in general on laws, some of which, like the rules of grammar, are rigid universal laws (though this will be further discussed below) and some of which only state what usually happens. There appear indeed to be some matters, such as style, in which experts can make true judgments (as to whether such and such a passage is Ciceronian in style or not) without being able to state any laws on which these decisions are based. But it seems likely that there is no difference of logical character here, only a difference in the state of the appropriate sciences: where true judgments can be made, I think that there must be laws of some sort, though perhaps they are not yet stated or known: wherever there is an art there is the possibility of a science. At any rate, this point, with the three mentioned above, indicate four limitations of precise methods in textual criticism, four senses in which “judgment” is indispensable. A fifth sense is provided perhaps by the importance, already discussed, of background knowledge: since the relevant infor-

mation is of indefinite extent, its use may be called "judgment" rather than the presentation of definite evidence.

Probability.

We have spoken of probability in several connections: now probability is a concept over which there is acute philosophical controversy. I shall not attempt in this paper to solve all the philosophical problems here raised, but shall merely indicate which senses of the word, and what procedures, are required by the methods of textual criticism.

First, we call a confirmed hypothesis probable.

Secondly, we call probable a proposition implied by a probable (i.e. confirmed) hypothesis together with other true propositions.

Thirdly, we say that it is probable that such and such has happened when this is an instance of a kind of process which frequently happens.

Fourthly, while we do not aim at mathematical measurements of probability, we say, in the various kinds of case mentioned above, that one possibility is more probable than another, and in doing this, we seem to compare probabilities of the second and third (and perhaps of the first and third) kinds as if they were commensurable quantities.

Fifthly, we conclude, by putting together various pieces of evidence, themselves in the form of statements of probability, that a certain conclusion is on the whole more probable than another.

Now it is plain that though we have used the phrase "intrinsic probability", because that is current in the literature of this science, we do not mean that any proposition is intrinsically probable in the philosophical sense: the probability is always relative to other information.

Although it is not only normal, but very convenient, to speak of probability in these ways, it may be argued that the logical procedures, in some cases, can be more accurately described in other ways. For example, when new observations bring two previously confirmed hypotheses into conflict, we might say that in choosing between them we weigh the prob-

ability of one hypothesis against another. But in fact we are here choosing between two alternative networks of hypotheses, either of which would cover the observations so far made. I believe that we make the choice in accordance with the well-known criteria of economy, simplicity, and fruitfulness. Again, we sometimes argue in the following way: a certain hypothesis is proposed; this (together with other information) implies that something has happened which is an instance of what very seldom happens; we say that this happening is improbable (in the third sense mentioned above) and consider that this weakens the proposed hypothesis. If we regard the probability of the particular case, derived from the statistical law, as a fiction, we may dispense with the statement "this happening is improbable" but we must admit that the relation of weakening holds between the statistical law and the proposed hypothesis.

Now a distinction is commonly made between two main senses of probability: the probability of a confirmed hypothesis and the probability of a particular case covered by a statistical law. It is fairly easy to show that the attempt to reduce the former to the latter leads to a vicious infinite regress. Besides, it is the probability of confirmation with which we are most concerned in this study. But, as we have just seen, the statistical probability seems to be commensurable with and to have a bearing upon probability of confirmation: presumably, therefore, the two are not sharply distinguished, they are not different kinds of things confused by the use of a single name. It appears, then, that we should treat statistical probability as a sort of probability of confirmation. This, however, is only a suggestion which we cannot here pursue.

The way in which transcriptional probability occurs is instructive. As indicated above, it arises from incomplete knowledge. Of the many factors that have helped to determine the behaviour of the various scribes who in turn copied a particular passage, we know only the superficial ones, such as the similarity of letters and their arrangements. The law is that such and such a reading is likely to have been corrupted into so and so, or that readings of the kind A are

often corrupted into the corresponding readings of the kind B, because we are relating an effect, not to its cause, but to one of its conditions in a field where other relevant conditions vary. But as we said before, we try as far as possible to overcome this limitation: we try, by study of the particular case, to understand what has happened causally, and we regard the statistical account as a second-best solution which we put up with reluctantly.

Intrinsic probability often depends on such laws as those of grammar and metre. The logical form of grammar rules is of course a large problem in itself. One view would be that they can be stated as precise, true, universal propositions, such as "Cicero never puts the object of a verb in the nominative case". Another is that they state what usually happens, but admit of exceptions. A third view is that they are normative laws, stating what ought to be done or expressing a demand. It may be argued that even if they presented themselves to Cicero in this form, this is irrelevant to textual criticism: textual criticism needs to know only what Cicero always or usually did, not what he felt that he ought to do. But we may reply that if we discover that Cicero did occasionally break a rule of grammar, but we think that he always tried to obey it, that he had a tendency in favour of the grammatically correct usage, we may in a passage where the reading is doubtful deduce "he probably wrote so-and-so" more easily from this tendency than from the simple statistical law about what he usually did. In working back from the statistical laws of grammar, metre and so on to statements about tendencies, we are following a course similar to that mentioned above when we treat the statistical laws of transcriptional error as statements about a few known factors in a causal field where other factors are unknown.

These, then, are the main uses of probability in textual criticism, and perhaps similar uses will be found in the methods of other sciences. It will then be necessary for a philosophical theory of probability either to find room for these uses or to explain them away. In discussing the philosophical theory of probability we should consider not only

the purely logical soundness of the theory, but also its application to scientific method among other things.

Realism *versus* Phenomenalism.

Scholars disagree in their attitude to "inferential manuscripts". Havet regards the detection of errors as a field in which certainty is attainable, whereas the restoration of an original reading and the description of its progressive corruption are matters about which we aim at mere probability or possibility. Because Havet wants to claim certainty for the essential part of his science, he asserts that the purpose of criticism is not, as we have argued, to discover original readings, but merely to detect and analyze errors: the textual critic is led on to make guesses about original readings and processes of corruption, but these are mere accessories to his main task. Havet even says that if criticism is interested in corrections for their own sake, it ceases to be scientific and becomes utilitarian (Havet, *op. cit.*, §115). From this conception of the purpose of criticism follows Havet's view that a correction has always a merely negative value, a view we discussed above. Greg goes further than Havet, saying that (in certain cases) the inferential manuscripts "are really no more than symbols for the groups of extant manuscripts derived from them" (Greg, *op. cit.*, p. 4, footnote). This last approaches a phenomenalist view³: by following out the same train of thought we should conclude that not only the lost manuscripts, but the processes of transcription, the original written by Cicero, and Cicero himself are only symbols for a certain arrangement of agreements and disagreements among the extant manuscripts and the other sorts of evidence. The sum of evidence is the method of verifying all the propositions stated about these things, and is therefore what they mean.

In opposition to such a view, we have been taking Cicero, the various scribes, and what they wrote and what they were thinking all as historical events, not merely as symbols for something else. Does this difference of attitude imply any

³ To be sure, this is only a hint, which is not pursued to extremes either in Greg's other statements or in his methods.

difference of method? I think it does. On the phenomenalist view, we should look, as Greg tends to do, for a cut-and-dried logical relation between the extant evidence and the historical thing which is a symbol for it. But it is obvious that such a relation, in cases where there is a great deal of relevant evidence (and I have maintained that in all cases the amount of relevant evidence is indefinitely great) would be enormously complicated. In fact I do not think any method based consistently on the phenomenalist view could be stated or followed. But on the realist view, the laws which we want to state and test, though indefinitely many in number, are not themselves very complex. This is analogous to the fact that statements like "there is a table in the room" are very much simpler than the statements about families of actual and possible sense data into which a thorough-going phenomenalist feels bound to translate them. Further, on the realist view, we regard any fact or historical event as being itself infinitely complex, though we may know only a little about it. Correspondingly, the number of connections which it has with the evidence already available and with other evidence that may later turn up is also potentially infinite. That is why our method of finding out about such events is hypothetical, in contrast with the logical calculus appropriate to the phenomenalist view.

Philosophical Conclusions.

In the course of this study of the methods of textual criticism we have at least touched upon a number of points of philosophical importance, and certain philosophical conclusions are at least suggested or supported by what we have found.

We have examined what may be called the complex-hypothetical method, the method by which a science builds up and tests a network of hypotheses. We have found that this is the general method of textual criticism, and that other supposed methods are either unsound or subordinate to this—for example, they may suggest some of the hypotheses which this method confirms or rejects.

Now this method, I should maintain, is also the method of the other sciences, including the physical sciences. I suggest, therefore, that though there may be in different scientific fields different techniques for guessing at hypotheses, the basic method of all sciences is the same: in particular, no sharp difference of method can be found between the historical sciences and the physical sciences. This view has not, of course, been thoroughly examined, but in our study of the methods of textual criticism we have found nothing that contradicts it and several resemblances to the methods of physical science that partly confirm it.

We have also found that textual criticism throws some light on the theory of probability. Here we have been considering not whether any particular theory of probability is logically sound, but rather what senses of probability are required for scientific method as exemplified in textual criticism. On this question we did not reach any final conclusion.

We noticed a number of cases in which it was misleading to rely upon statistics, and in which a detailed study of individual readings and passages was required. "Degree of resemblance", "merit", and "authority" are among the concepts which, if treated statistically, lead to error.

We also found that the search for certainty can lead to errors in method: Greg's calculus of variants, and Havet's view of the purpose of textual criticism are examples of this.

Connected with the search for certainty is the phenomenalist attitude towards inferential manuscripts, etc. We have found a contrast not only between the realist and the phenomenalist attitudes, but also between the methods of investigation appropriate to each of these. This may help to answer the logical positivist's question, what difference does it make whether one accepts realism or phenomenism. It makes a difference to one's scientific methods, and I maintain that in textual criticism—and, I surmise, in other sciences as well—the methods associated with realism are the ones which the material requires and which are fruitful in practice.

REVIEW ARTICLE.

MYSTIC OR PRAGMATIST?

By A. BOYCE GIBSON.

THIS volume¹ consists of a translation of *La pensée et le mouvant*, a collection of articles with a long and significant introduction, published in French as long ago as 1934. Most of the articles were written very much earlier, and even the introduction was written before the appearance of Bergson's last major work, *Les deux sources de la moralité et de la religion*, which was published in 1932. Despite the late date of this translation, therefore, it provides no posthumous revelations. On the other hand it contains material which no serious student of Bergson can afford to neglect. The introduction is a deliberate résumé by Bergson in his old age of his life's work (up to, but not including, *Les deux sources*); in more than one respect it materially helps to elucidate problems raised by his longer publications; and four at least of the articles are *loci classici* for certain aspects of his philosophy: I refer to those entitled *The possible and the real*, *Philosophical Intuition*, *The perception of change*, and *An Introduction to Metaphysics*. Of these, only the last had been previously translated (by T. E. Hulme); and his translation has been out of print for some time. For those who have the misfortune not to be able to read this supreme literary artist among philosophers in the original, the translator has therefore performed an important service. How important can be gauged by a glance at M. Jacques Maritain's recent essay (in *De Bergson à Thomas-d'Aquin*) on *La métaphysique de Bergson*, in which an actual majority of the references chosen to illustrate the main outlines of Bergson's position occur in

¹ *The Creative Mind*. By Henri Bergson. Translated by Mabelle L. Andison: (Philosophical Library, New York; price \$3.75).

the work she has just translated. Incidentally, she has done her work very well. Occasionally she falls into the traps of transliteration (e.g. "degrees" for "degrés", where it means "steps", p. 245); but for the most part she is accurate, and, what is more, she uses her imagination: a quality greatly needed by translators of Bergson, and possessed by very few of them. For the use of "schema" as a plural (p. 167) the general deficiency of educated Americans in classical scholarship is no doubt responsible.

In reviewing this volume, I propose to retrace the main features of Bergson's philosophy, with special reference to the text before me. This line of approach, which may seem over-ambitious in a book-review, is perhaps the more allowable, as no appraisal of Bergson's work as a whole has appeared in this Journal since his death in January, 1941.

In a letter to his friend, the Danish thinker Harald Høffding, Bergson once wrote: "Any account of my views will distort them as a whole, and therefore lay them open to a crowd of objections, if it does not first of all take its stand on, and if it does not continually return to, what I consider to be the very centre of the doctrine, the intuition of duration." What he considered to be structurally central was also historically his starting-point. In the introduction to the present volume he tells us how, starting from a position something like Spencer's, he came, through a consideration of the weaknesses of Spencer's mechanics, to examine the idea of Time: "and there", he adds, "a surprise awaited me" (C.M., p. 10). The nature of that surprise is well known to students of Bergson's earlier works. He found that time as measured is something quite different from time as lived. The former is discrete, measurable, made up of distinct parts adjacent to each other—and it does not flow: the latter is continuous and all of a piece; not being composed of parts, it is not measurable; and flowing is the essential thing about it.

This discovery Bergson set out to develop in two books devoted almost entirely to psychological research—*Time and Free Will* (*Les données immédiates de la conscience*) and

Matter and Memory. They illustrate admirably one persistent feature of Bergson's thought: he concentrates his metaphysical problem in a concrete empirical issue. He has always dwelt intimately with his facts before committing himself to a theory, and he insists on it specifically in the work we are examining: "It is an inclination natural to the human mind, . . . to apply a conclusion to other objects without having actually enlarged the circle of its investigations, but it is one to which we must never yield" (p. 106). So, in *Time and Free Will* he concentrates upon the question of "psycho-physics", raised at that time through the formulation of the Weber-Fechner Law; i.e., are psychic states measurable? He concluded that in a sense they were; for purposes of practical prediction it is possible to split up the flow of consciousness into moments separated by intervals, and, in accordance with the practice of physics, to measure the distance between them: but, he added, this was a manipulative deformation, distorting the real nature of the psychic process. The trouble is, he continued, that philosophers have never taken time seriously; they have recreated it in the image of space, and attributed to it the homogeneous discontinuity proper to space. As long as they were absorbed with problems of physics, their error could pass muster; for matter is at home with space, and is not denatured by being assimilated to it; but in consciousness time flows freely and continuously, and defies disruption; and the application to its interpretation of the spatial categories of physics is therefore misleading. What we *experience* (as we look below the assimilated crust) is what may be called, to distinguish it from physicist's time, *duration* (*la durée*): "the continuous progress of the past which gnaws into the future and swells as it advances" (*Creative Evolution*, p. 5); "the form taken by the succession of our states of consciousness when our self lets itself live, when it refrains from setting up a barrier between the present state and those which preceded it" (*Les données immédiates*, p. 76).

In his first two works, Bergson distinguished sharply between two different sets of factors in the world. His main

object was to refute the comprehensive materialism of his day, and for that purpose it was enough to show that psychical events did not conform to physical categories. The result is a deep-seated dualism which pervades his philosophy in all its aspects. There appears to be no step between the two worlds. This is a theme which has constantly bedevilled French philosophy—it is the main stone of stumbling in Descartes, and reached surprising lengths of logically impeccable absurdity in his occasionalist successors. But it was particularly incriminating at the end of the nineteenth century, when the theory of evolution was a recent discovery and most of the great thinkers of the time were at work trying to interpret it. If there was one thing which the theory of evolution seemed to prove, it was that there is no discontinuity between the earlier and the later types of event in cosmic history. For an outright occasionalist dualism the whole intellectual climate was singularly unpropitious. Bergson, who lived very much in his own time, and had, as we have seen, been addicted to Spencer in his youth, could hardly have failed to see the difficulty. If he was to break away from materialism without conflict with a main contemporary dogma which he, at least, never thought of questioning, he would have to extend his hypothesis of duration from psychology to cosmology: in short, make a metaphysic of it.

It was characteristic of Bergson, and a sure mark of his greatness, that he proceeded to attack the difficulty at its centre. He accumulated a vast evolutionary learning, as he had previously soaked himself in contemporary psychology, and turning over the evidence came to the conclusion that not only the self, but the world, is essentially *durée*. "The universe endures." This conclusion is set forth with a mastery of the scientific material, and a new wealth of more purely philosophical argument, in *Creative Evolution*. It would be unfair to say that the category of *durée* had been transferred from one field to another (Bergson is emphatic that each of his main writings supplies independent corroboration of the main thesis): but it is certainly found to be working more exten-

sively than previously suspected. In the history of species, as in the history of the self, there is that passing over of the past into the future, that continuous but heterogeneous development, that unpredictable uniqueness of creative process, which are found in *durée* alone.

Unfortunately, the universe which endures includes the matter which has been said to have nothing of duration in it. Bergson is well aware of this difficulty, and it is faced in *Creative Evolution*, though the pages concerned with it are some of the uneasiest in the book. Generally, he takes the Heraclitean view that inertia is a degradation of energy. The same force which, at its top, is duration, constitutes, in its torpor, the systems of the material world (cf. "it was ever, and is now, and ever shall be, an ever-living Fire, with measures of it kindling, and measures going out"). But he still writes at times as if the dualism were as rigid as ever. There are two possible reasons for his vacillation, and both concern the prestige of science. If matter is life run down, then the systems of knowledge which embrace matter (i.e., collectively, "science") are of less importance than the direct and non-scientific apprehension of duration—which turns out to be metaphysics: and moreover the view that life comes first and matter afterwards suggests *devolution* rather than *evolution* as the cosmic principle; and Bergson would have thought that to be bad science and worse philosophy. But, whatever the reason, there is this uncertainty in Bergson, and new evidence on his attitude to the issue is one of the things which, in reading a further book by him, the attentive interpreter will closely watch for.

There, officially, the matter stood till the publication in 1932 of Bergson's last and possibly most dazzling work, *The Two Sources of Morality and Religion*. Little need be said here about this crowning achievement, partly because the present reviewer has previously attempted to appraise it in this Journal (March, 1937), and partly because its subject-matter is hardly referred to in the volume before us. It was the result of a further long familiarization, this time with

the phenomena of morality and religion, and particularly of mysticism—for in this matter he regarded the mystics as the relevant experts. But no really new principle emerges from the new interests. The universe still endures; the experiences which those who had them interpreted in terms of a timeless theology—and not without reason, for a certain curious transcendence of time is commonly reported to be part of the phenomenon itself—are reinterpreted in terms of creative evolution. The work, however, by its specific analyses, helps to make clearer what has been implied in Bergson's position from *Creative Evolution* onwards: that metaphysics and mystical experience are in the end the same thing, and that the quest for truth demands of the self an alignment amounting to identity with the immanent source of its being.

And this brings us to the second main feature of Bergson's doctrine: his theory of intuition.

Bergson agrees with Plato that corresponding to radical difference in the object there will be radical difference in the mode of apprehension. The way to get to know the living is not to put up theories about it, but to live alongside it. It is not possible to live alongside inert blocks of extension, and that is why in dealing with such the analytic intellect is the best guide. But where it is possible, the intellect, with its external approach, its hypothetical chopping and pruning, its experimental manipulation, while moving always toward the centre, will never be able to reach it. It will enable us to anticipate and to make predictions about behaviour: that in fact is what it is there for: "the intellect is cast in the mould of action". But by its very nature it cannot compass the historical uniqueness of the facts. This does not matter in the world studied by physics, in which the repetitions are more significant than the individual instance. But it makes all the difference in the world in the case of organisms and persons, for here historical individuality has emerged as a leading characteristic. And if the universe "endures" in the manner of an organism, it makes all the difference in the case of the universe too. It follows that philosophy, which is the

attempt to comprehend reality (though in other respects, as we shall see, Bergson is very "modern", and indeed almost "Cambridge", he is in this respect thoroughly traditional), can never be completed by the intellect alone. It requires, at the far end at least, that utter merging of consciousness with the flow of things to which Bergson has given the name "intuition", and which, in its cosmic application, differs hardly at all from what others have described as mystical experience.

Bergson tells us (C.M., p. 33) that he hesitated to use the term intuition, because of its association with the search for the eternal. "The intuition we refer to", he says by way of enforcing the contrast, "bears above all upon internal duration" (C.M., p. 35). "It grasps a succession which is not juxtaposition, a growth from within, the uninterrupted prolongation of the past into a present which is already blending into the future. It is the direct vision of mind by mind—nothing intervening, no refraction through the prism, one of whose facets is space, and another, language . . . Intuition signifies . . . consciousness, but immediate consciousness, a vision which is scarcely distinguishable from the object seen, a knowledge which is contact and even coincidence" (C.M., pp. 35-36). And again: "We call intuition here the *sympathy* [author's italics] by which one is transported to the interior of an object in order to coincide with what is unique and consequently inexpressible in it. Analysis on the contrary is the operation which reduces the object to elements already known, that is, common to that object and to others" (*Introduction to Metaphysics*, C.M., p. 190).

From such passages it is clear that though Bergson does not share the philosophical assumptions of, for example, Plotinus or Schelling or Bradley, he has the characteristic passion of those mystics among philosophers, namely, their passion for immediacy. His first work was christened, in French, *Les données immédiates de la conscience*: phenomena which he opposed to the mediate data of sense perception. "Metaphysics", he tells us in his *Introduction*, "is the science

which claims to dispense with symbols" (C.M., p. 191). Again, in his essay on *Philosophical Intuition* (C.M., p. 149), "The essence of philosophy is the spirit of simplicity". All our thinking is the imperfect attempt, through the circumlocution of concepts and images, to clarify and to convey an immediate impression which, in the hurry of our practical life, disappears below the surface and has, by intense inward labour of concentration, to be brought from the depths to the light of day. At best, however, as the mystics have always said, it is an attempt to express the inexpressible.

The analogy can be carried still further. One of the problems of the mystic is just this difficulty of communication. When he speaks, as he must, despite the counsel of prudence in the last sentence of Wittgenstein's *Tractatus*, for it would be miserly to keep anything so marvellous wholly to himself, he has resort to concepts and images belonging to the outward world. That is to say, he cannot strictly speaking communicate at all; he can only by a sort of evocation, help others to a similar experience. On the whole, mystics have had recourse in their extremity to successive images rather than to abstract ideas. Bergson does the same thing, and, what is more, he deliberately defends the practice which they intuitively follow. "There are cases in which it is imagery in language which expresses the literal meaning, and abstract language which unknowingly expresses itself figuratively. The moment we reach the spiritual world, the image, if it merely seeks to suggest, may give us the direct vision, while the abstract term, which is spatial in origin and which claims to express, most frequently leaves us in metaphor." In these words poetry turns the tables on science with a vengeance, and those who by way of jeering maintain that "metaphysics is a species of poetry" are at once confirmed and confounded.

It is not surprising, then, that Bergson should specifically cite the analogy of artistic communication. The artist is a revealer to men of what he can see and they cannot; and the effect he has on them is to extend their faculties of perceiving. This he does by means of images which, though individually

only symbolic, are collectively expressive (c.f. C.M., pp. 159-160). The philosopher, when he finds he must communicate, adopts the same method; and a well-chosen cluster of metaphors may be worth many abstract nouns to him. In this matter Bergson certainly practised what he preached, and it has brought him criticism from the sort of critic who thinks that to be a philosopher one has to be arid and pedantic; but, right or wrong, he has surely indicated what he means. His practice, in fact, goes a long way to vindicate his contention.

Even this is not the end of the parallel. The mystics have always insisted that the moment of illumination is hard to attain, and can be approached only by intense preparatory concentration. Bergson says exactly the same thing. "One does not obtain from reality an intuition, that is to say, a spiritual harmony with its innermost quality, if one has not gained its confidence by a long comradeship with its superficial manifestations" (*Introduction to Metaphysics*, C.M., p. 236). In a similar though more intimately autobiographical vein he writes (C.M., p. 105): "Tension, concentration, these are the words by which I characterized a method which required of the mind, for each new problem, a completely new effort." "I repudiate facility: I value effort above everything" (p. 103). This is the answer to the easy criticism which alleges that in appealing to intuition Bergson is encouraging his readers to exalt every chance thought that comes into their heads. The natural bent of the mind is on the side of space, intellect, and action (C.M., p. 39). To effect the necessary alignment with the reality which flows requires a decisive effort of detachment and sympathy. "To philosophize means to reverse the normal direction of the workings of thought" (C.M., p. 224).

In reply to the parallel we have been elaborating, it might be urged that in mystical experience thought ceases, and that to identify philosophy, or metaphysics, with such experience is to put an end to philosophy as commonly understood. (The same problem arises in English philosophy in Bradley's

Appearance and Reality). Bergson does not shrink from this conclusion. "Philosophers return to the immediately given" (C.M., p. 91). "The philosopher seeks to be at one with nature" (C.M., p. 149). "Metaphysics will become experience" (C.M., p. 17). To achieve philosophy, then, is to be merged in reality, and in the very act one ceases to philosophize. It is presumably because the "alignment" is not often quite "coincidence" that Bergson can talk of philosophy as "consciousness" at all (p. 105). In fact, philosophizing can go on because it is not perfected. Its consummation would be a merging—not a transcendence, but an identity—of subject and object.

These approximations of Bergson's "intuition" to the experiences of the mystics should be emphasized, not only because the phenomena are themselves very much alike, but because his study of the mystics occurred just at the time when he was moving from psychology to cosmology, and may well have hastened the process. *Creative Evolution* was published in 1907, and in 1906 Bergson told M. Maritain, then one of his students, that he had been reading St. Teresa, and had expressed the opinion that philosophers might well be a little more mystical, and mystics a little more philosophical (J. Maritain, *De Bergson à Thomas d'Aquin*, p. 52). It remains true, however, that Bergson continued faithful to his evolutionary metaphysic, and identified reality with duration, or perhaps, for his picture of it is too concrete for an abstract noun, the enduring. The alignment is not with God, conceived as beyond the process, and through Him with the process He has created; it is directly with the enduring, conceived as a sort of deity. Bergson has more than once given hints of a different doctrine. There were his famous letters to Tonquédec in 1912, in which he announced his belief in a transcendent God, but confessed himself unable to locate Him metaphysically. There are certain indications in the text of *Creative Evolution*: e.g., p. 54, "Harmony is behind us rather than before: it is due to an identity of impulsion rather than a common aspiration", and p. 110, where he alludes to a

creation "which goes on for ever in virtue of an initial movement". But such admissions never suggested to him any modification whatever of his central position. He repudiated the whole conception of eternity as belonging to the block spatialized universe of scientific discourse: "An intuition which claims to project itself with one bound into the eternal, limits itself to the intellectual" (C.M., p. 54). From first to last, Bergson interpreted the mystics in his own fashion: he arrayed the heirs of Plato in the garments of Heraclitus.

To those who are concerned about being up to date (and some of our esteemed contemporaries do in fact read like erudite editions of *Vogue*), all this discussion will appear as tedious as the current fashion appears to the reviewer. It may console them to remember that this is only one half of Bergson's philosophy. He also presents an account of matter, space, intellect, sense-perception, and action, the factors which belong together on the other and, according to his usual view, less real side of the fence. This account is in many respects quite surprisingly modern. Its affinities to the pragmatism of the early years of the century is well known; Bergson wrote an appreciative essay on William James (C.M., p. 248-260), and William James, shortly before his death, announced his adhesion to Bergson. Bergson's account of intellect is wholly pragmatic, and hence not far removed from the verificationism of Cambridge and the Carnap-Dewey synthesis of Chicago. "Intellect is cast in a mould of action." (Cf. the reference to "the automatic transfer to speculation of habits contracted in action", C.M., p. 83). In other words, conceptual thinking exists for efficiency, as an instrument of living, as a means of handling things and getting things done, and not for coming to grips with reality at all. One might compare the contrast with the respective attitudes of a pioneer and a painter to a virgin forest. The pioneer knows just how he can *use* those trees, just what they will be worth as timber, just how he can surmount his haulage problems, just what can be made of the various kinds of trees concerned. The painter, who knows none of these things (unless, in this

complex world, he happens to be a timber merchant) none the less *feels* with the tree; recapitulates dimly in himself its patience, its dumb tenacity, its steady pushful rise to power, and its precarious tenure of life in a predestinate fixed spot. Bergson, with the pragmatist, thinks of intellectual activity as being concerned with what can be done with things; but in opposition to the pragmatist, he thinks that there is an alternative approach to the real thing.

For this reason, the arguments which led Bergson to his view of intellect differ widely from those of the average pragmatist, old style or new style. He has little to say about the part played by experiment in the growth of knowledge, and he is not at all impressed by the plea for integrating philosophy and action in plans for reform. What chiefly moves him is a sharp sense of the contrast between the intimate knowledge *of* things in intuition and the circumambulatory knowledge *about* things in discursive thought. Proceeding from the experienced diversity of the two mental attitudes, he then inquires what purpose the distortions of the intellect could serve. He finds the answer in contemporary conceptions of biological utility. The intellect distorts because distortion is necessary to action.

In this respect it only carries further what sense-perception has begun. "Our intelligence is the prolongation of our senses" (C.M., p. 43). It is because intellect is founded on sense-perception that it cannot effectively correct it—this was the main source of error in classical philosophy (C.M., p. 156 and 158). Even at the perceptive level, the utilitarian selection of detail from the undivided flow has begun to operate. Here, like many French philosophers in a crisis, Bergson harks back to Descartes, who propounded exactly this doctrine in the *Sixth Meditation*. It explains as well as any other why our nature should divert us from reality.

This pragmatic interpretation of our ordinary awareness is attached, as by many modern writers, to a view that the main function of the intellect is prediction. This is indeed an

obvious corollary: the usefulness of mind as an instrument of survival lies in that it enables us to anticipate the course of events. For this we have to get out of the stream and gain a wider view, at the expense of losing touch with the intimacies of the flux. The universal character in things is the isolation of a characteristic which interests the living creature as it copes with its environment (C.M., p. 62). In another passage in this volume he does talk, by way of contrast, of "objective generalities" (p. 65), which seem to be what Alexander called "categories" and Plato (in the *Sophist*) τὰ μέγιστα γένη, and this concession, if pressed, might be hard to reconcile with the view that the concrete flux alone is real; but certainly all universals denoting concrete objects are carved from the flux by our practical interests. Bergson sometimes commits himself to nominalist modes of statement (e.g., C.M., pp. 60-61, "we agree to call a general idea a representation which groups an indefinite number of things under the same name"); and such statements show how far removed he is from supposing that the "general idea" is founded in the flux itself. On the contrary, it is a construction of our own, intended to serve our own purposes.

A further point of convergence between Bergson and the Cambridge School lies in his repudiation of the conception of "support" (C.M., p. 84). Both Platonists and materialists think that phenomena *need* support; they make the flux depend on Forms, or reduce it to manifestations of matter. In both cases, as Bergson said repeatedly in *Creative Evolution*, *tout est donné*; the real is timeless, and things only *seem* to happen. The changing, in his view, needs no support from the unchanging. This view he thinks he can maintain, as Heraclitus did, without committing himself to the thoroughgoing phenomenism of the neo-Humians, for he holds that the flux *is* the real. In this way he avoids the difficulty raised by Bradley, that phenomenists talk about phenomena without allowing anything for them to be phenomena *of*. He still has, however, to explain how it is that the real, or flux, "supports" the appearances, or Forms.

Finally, Bergson anticipates, to some degree, the "therapeutic positivism" practised by Mr. John Wisdom, both in thinking that the traditional metaphysical problems are imaginary, and in holding that to be released from them is good for the soul. He writes of "phantom problems which obsess the metaphysician" (C.M., p. 72), and of "human thought beginning to breathe" when it "no longer worries over questions which impeded its progress" (C.M., pp. 75-76). Such are the idealist-realist controversy (p. 88), the problem of "why there is being" (p. 113), the problem of actuality and potency (the subject of the whole third chapter, pp. 107-126), and the problem of freedom and determinism (see *Time and Free Will*). Such problems "frequently resolve themselves when correctly stated, or else are formulated in terms of illusions which disappear as soon as the terms of the formula are more closely examined" (p. 112). There are two main reasons for confusion, and they are closely parallel to those stated by Kant in the section on the Antinomies in the *Critique of Pure Reason*. Either the categories of the intellect have been extended from the sphere of fabrication, where they belong, to the sphere of creation, where they are out of place; or else what is intuitively perceived is falsely contrasted with what is intellectually cognized, and views which are both in place in their own fields are mistaken for conflicting interpretations in a single field. In the former case there is no conflict, because the problem is artificial. In the latter there is no conflict, because there is no comparison. In both alike the feeling of perplexity will be resolved if only we stop asking the wrong questions. Needless to say, Bergson has direct insight in reserve, and this context makes a deal of difference to the interpretations of our ordinary intellectual procedure which he shares with the modern phenomenalist; but those resemblances are none the less striking. Perhaps one might say that they are Bergson with the lid off: remembering always that Bergson attached much importance to the lid.

So much for the general theory, phenomenalist on one side and mystical on the other, by means of which Bergson hoped

to interpret the ill-assorted facts with which all philosophers are confronted. It remains to draw out some of its associated themes and to comment on certain difficulties which it raises.

And, first, there is the point about unpredictability. In the secondary realm of space one can, of course, predict easily enough; and even when it comes to psychical beings all sorts of things can be predicted *about* them. But they *themselves* afford no foothold for prediction. Their qualities are repeated, but at each moment they are unique in their growth and spontaneity. There is genuine novelty in the world: they are part of the unique continuity of things in which the elements repeated are never quite the same (as mere historical events, they *must* be different), and in greater or lesser degree, according to the degree of concentration and relaxation, move forward in the effort of creation. This is Bergson's solution of the problem of freedom, which, he holds, is one of those which when properly stated no longer arises. Only on the level of intellect does the conflict between choice and determinism occur. Reality knows nothing of either of them.

Secondly, there are the associated problems of possibility and of "nothing". It is clear from the repeated emphasis given to them, both in the present volume and in the fourth chapter of *Creative Evolution*, that they occupied a central position in Bergson's picture. Briefly, his view was that there is no such thing as the possible until the event has occurred, and that its possibility is retrospectively created along with the event itself. If the event were possible before it became actual, it would be to that extent predictable, and its outlines, at least, could be sketched beforehand. Such a conclusion would conflict with the doctrine of absolute novelty. The whole position is succinctly stated in C.M., p. 119: "As reality is created as something unforeseeable and new, its image is reflected behind into the indefinite past; thus it finds that it has from all time been possible, but it is at this precise moment that it begins to have been always possible, and that is why I said that its possibility, which does not precede its reality, will have preceded it once the reality has appeared. The possible is there-

fore the mirage of the present in the past." This profound and difficult doctrine conflicts with a well-established mental habit, as Bergson would have been the first to admit; but that habit, he would add, was formed, not in the quest for reality, but in the service of action. "It is possible" means "it can be fabricated", and is not a pronouncement about *it* at all. There is perhaps no feature of Bergson's philosophy which shows more clearly his strong bias to empiricism. He keeps his mind firmly directed to the concrete event, and will have nothing of essences, subsistence, potency, or any other non-existential form of being. "An existence can only be given in an experience" (C.M., p. 57).

Similarly, with the idea of nothing. "Nothing" is a term belonging to the sphere of action, where it designates "the absence of what we are seeking" (C.M., p. 116). (Compare, though with a sense of the difference of context, the similar conclusion about "not-being" in Plato's *Sophist*). "Nothing" can play no positive role whatever; from reality it is just completely absent. It may be true (to go somewhat beyond the sphere of Bergson's own discussion) that the *idea* of nothing is a positive working factor in things; and when, for example, Heidegger, in his cryptic lecture, *Was ist Metaphysik?*, hypostatizes *das Nichts* and puts it in the centre of his picture, he is confusing "nothing" with its idea: as is evident from his citation of *Angst* as the human experience in which the spectral gulf is revealed. Experience gives no "nothing"; it is another shadow cast over our sense of the real by our practical needs. In practice something has to be suppressed, and its suppression gives rise to the idea of absence, or nothingness (p. 117). But in reality, as opposed to our practical abstractions, the absence of one thing is always the presence of something else.

For this reason many metaphysical questions, namely, those clustering round the central "Why is there being?", are thoroughly artificial. They arise "only if one posits a nothingness which supposedly precedes being"; their pre-supposition is, "there could be nothing". The reductive

analysis of "nothing" shows this statement to be meaningless. In the same spirit, Bergson in *Creative Evolution* had analysed "disorder", pointing out (p. 232, Eng. trans.) that what we call disorder is an order we do not expect—in fact, we might add, an order which we are unable to use. Actually, any order, whether expected or not, is a "fabrication"—the word hits the middle point between creation and falsehood—and in reality there is only the truly creative, and therefore unpredictable, flow of events.

These developments of the main theme help us when we return to consider the outstanding problem which Bergson leaves behind him—the problem of the two worlds. We have seen that in adapting his psychological conclusions to the interpretation of things in general he is forced to consider in relation the two sets of factors which he had hitherto treated as irreconcilable. On the one side is space, intellect, determination; on the other, duration, intuition, freedom. Now both of them have to be brought into the same picture. How is that picture to work out?

We have noticed that the majority tendency in Bergson's larger works, and especially in *Creative Evolution*, is to consider matter as life run down: *détente* as opposed to *élan*. We have also noticed occasional indications of a contrary view, maintaining the dualism of the earlier works to the last. In the *Introduction* to the present volume there is a long discussion of the point, and it swings strongly towards the second position. The reason, as we had cause to anticipate, is his sensitiveness to the claims of science.

On any showing, it is a central feature of Bergson's teaching that the method of intuition, namely, metaphysics, is the only proper approach to "spirit". The correlation "intuition-spirit" is firmly established before any discussion about the place of science commences. It is a natural continuation to contrast it with the further correlation "intellect-matter", and to make each supreme in its own field. Natural, but misleading; for the *universe* so often mentioned in *Creative Evolution* consists of both matter and spirit, life now being reckoned on the side of spirit. Any account of the

universe must be an account of the whole. But in that case science, which gives the account of matter, will be subordinate to metaphysics, which gives the account of the whole enduring universe; it will be reduced, as by the Absolute Idealists, to a system true as far as it goes, but unable to grasp the real. If Bergson had been thorough-going in his instrumentalism he might have been satisfied with that conclusion. But Bergson never quite shook off the simple materialist view about science. He still liked to believe that science can give us the truth about its objects, even when he became convinced that its range of objects was limited. It is hardly for a modern instrumentalist to criticize him. The modern instrumentalist who treats science pragmatically does not have the discomfort of comparing it unfavourably with something else, for there is nothing else in his view to compare it with. For Bergson, to admit that a pragmatically constituted science produced useful conclusions rather than true ones would have meant giving science the second place. In some moods he was ready to do it; in others he definitely was not.

Thus on p. 42 of *Creative Mind* we read: "We make a clear distinction between metaphysics and science. But at the same time we attribute an equal value to both. I believe that they can both touch the bottom of reality." And again on p. 49: "Less modest in my claims for science than most scholars have been, I consider that a science founded on experience as the moderns understand it, can attain the essence of the real." To the latter passage he adds, most significantly: "It is therefore already fulfilling half the program of the old metaphysics, it could be called metaphysics did it not prefer to keep the name of science." To support these contentions he cites the evidences of mutual adaptation of intellect and matter in the struggle for existence. "If the intellect has been made in order to utilize matter, its structure has no doubt been modelled upon that of matter." In the formative phase of the struggle, "nature turns mind away from mind, turns mind towards matter" (p. 48). Thus by treating matter as the intellect treats it, by external manipulation, by comparison of static points of arrest, by ignoring

history and uniqueness, we are not deforming it in any degree whatever. We are telling the whole truth about it as it really is. In fact, in this field the metaphysical approach would be as out of place as the scientific approach in respect of the changing and enduring.

The crucial point about all this is the implication that in its physical aspects the universe has no history. In that case, duration is not a character of the universe but just a local phenomenon. Clearly Bergson cannot have it both ways. But there is in these passages not only a discrepancy with other passages, but a manifest intrinsic difficulty as well. As Bergson knows quite well, science is concerned with causal systems. Now wherever there is cause there is time. Bergson knows this quite well too; but he thinks that physicist's time is somehow not quite genuine. This may be possible; but if it deforms, it deforms something, and that is the durational element in the history of the physical world. For the physical world *has* a history, and what science does is to take repetitive slices of its history and to elicit their constant characteristics. It is true that science abstracts from the particular historical cases and concentrates on formulating general laws; and this means that it need not discuss unique occasions. In dealing with matter, with its tendency to repetition, only the occasion, so to speak, and not the content of the occasion, is unique. Hence it can be ignored, as having no reference to the purpose in hand. If this is a practical purpose, as Bergson supposes, the uniqueness of the present occasion would indeed be misleading, for what is required is guidance sufficiently detached from contexts to be useful on future occasions. But what this means is that science selects what it wants, and drops all the history which it does not need. It does not mean that it is confronted with an unhistorical segment of reality.

On this point, then, the translation of Bergson's essay reinforces for the Anglo-Saxon reader one of the more questionable elements in his thought. We have not, however, yet exhausted what it has to tell us about the relation between science and metaphysics. On p. 51 we read that they "will differ in object and method, but will commune in experience".

Further (p. 50), "all along their common surface", they will be able "to test one another, till contact becomes fecundation". "The results obtained on either side will of necessity be linked, because matter links up with mind." Science will thus communicate to metaphysics "habits of precision" (p. 50), and metaphysics will communicate to science that *esprit de finesse* which is "the reflection of the intuition in the intellect" (p. 94). Such statements do something to soften the break, while confirming each activity in occupation of its own field. They do not alter the dichotomy, or affect the contention that both science and metaphysics can attain an absolute; and for that reason they do not resolve the difficulty raised in the preceding paragraphs. But they do provide a more credible account of the mental processes concerned.

One of the admirable features of Bergson as a philosopher is his command of the empirical facts. He does not, like many philosophers, loosely refer to them after the event for a perfunctory verification; he soaks himself in the material and lets the theory emerge from it with an air of inevitability. He was trained as a scientist, and every time he measures up to a major philosophical problem he reacquaints himself with the latest developments in the sciences which concern his inquiry. He thus presents a living illustration of the philosopher who realizes what it feels like to be a scientist. As a late nineteenth century scientist, too, he understood the spell of *l'esprit géométrique*, and knew how it had to be humanized by *l'esprit de finesse*.

But, admitting "contact" and "fecundation", there remain the original basic conceptions. Science *in itself* is presented as all argument and no insight, and philosophy *in itself* as all insight and no argument. The elements of intuition in science and of argumentation in philosophy, which are not only admitted but emphasized, are represented as being caused by "fecundation" from the other source. It might be simpler to take both science and philosophy as they stand, and to acknowledge, in both, elements both of "intellect" and of "intuition". Now, whenever Bergson treats of the subjective activities, science and philosophy, we find him not disinclined

to this view. But, being convinced both that duration and the block universe are wholly other, and that each of these objects is apprehended by a corresponding subjective activity, whenever he begins to treat of the object he draws the line much more firmly between the subjective activities themselves. If he had reflected on his own practice in this matter, he might have come to admit that discursive thought and immediate insight could be directed to the same objects. The fact remains that he never did.

For, when all is said and done, it is Bergson's profoundest conviction that the universals of science are abstract, and must always stop short of actual existence. "An existence", he writes (C.M., p. 57), "can only be given in an experience". But, observing the pragmatic selectiveness of sense-perception, he knew that any appeal from intellect to sense was merely an appeal to the same judge in a homelier wig. To find existence we have to fight our natural outward orientation and sink back through the depths of our own consciousness into communion with the enduring universe. He complains that no abstract scheme will ever offer an exact fit. It will be too loose for the concrete detail. A sound philosophy should not be such that whatever the facts are, it will remain true; it should follow everywhere and always "the undulations of the real". "The only explanation we should accept as satisfactory is one which fits tightly to its object, with no space between them, no crevice in which any other explanation could equally well be lodged; one which fits the object only and to which alone the object lends itself" (C.M., p. 9). Along this line the identity of subject and object is the only goal: "metaphysics will become experience itself".

It is perhaps worth noting that, despite his pragmatic view of thought, Bergson is in essentials in the contemplative and not at all in the activist tradition. The truth lies in the course of reality as it flows. To extend his anti-intellectualism to cover the field of action, as was done, for example, by Georges Sorel, is wholly contrary to his own indications. He believes that the problems of action *should* be handled intellectually; and he also holds that reality will

not be found that way. In this respect, if not in others, he is more in accord with Greek and mediaeval philosophy than with Kant or William James. There is of course no reason why Sorel should not have taken hints from Bergson and gone ahead in his own way; but that is certainly what he did, and to suppose, as some political writers do, that Bergson would have accepted the emendation, is firmly to ignore what he says. Melvin Rader (*No Compromise*, p. 37), is one of the few who gets it right. "The 'intuition' which he exalts is 'instinct become disinterested', and is much more akin to pure aesthetic contemplation than to political pragmatism. It is Sorel who reinterprets Bergsonian intuition so that it becomes a faculty of political action."

In discussing these general issues, we have strayed from the path of conscientious reviewing. It remains in conclusion to note the two small essays on Claude Bernard and Felix Ravaisson. Even if Bergson selected somewhat from their writings to present them as precursors of his own philosophy, he pays them the most delicate and generous tribute, and reveals himself as the understanding and sympathetic critic which, I am told, all his friends knew he was. Perhaps the very way he selects from them is a statement of the debt he owed them. It appears from his discussion of them that it must have been considerable; and these essays will therefore be of interest to historians engaged in tracing his sources. Claude Bernard's *Introduction to Experimental Medicine* was one of the best of a series of admirable treatises on scientific method issuing from France during the nineteenth century; and his message was a sustained warning against short cuts and over-simplification. Bergson quotes from him (C.M., p. 245) a passage which clearly foreshadows his own view of the function of science. "When we make a general theory in our sciences, the only thing of which we are certain is that all these theories are false, absolutely speaking. They are only partial and temporary truths, which are necessary to us as the degrees (? steps) on which we rely to advance in our investigation." One can see how such comment, com-

bined, for example, with the study of St. Teresa, could contribute to Bergson's final position.

But it is perhaps to Ravaisson that we should look as the more intimate moulder of his thought. Ravaisson (1813-1900) was one of those philosophers who have had an overwhelming influence in their own country without making an impact abroad: Parodi (*La philosophie contemporaine en France*, p. 29) refers to his works as *les bréviaires de tous les jeunes philosophes*, and Bergson was certainly one of their closer students. Consider the following statements of some of his cardinal doctrines: "Instead of diluting his thought in the general, the philosopher should concentrate it on the individual" (p. 267); "each being has its own way of undulating" (p. 272); "art is a figured metaphysics; metaphysics is a reflection of art" (p. 274); "mechanism is only the fossilized residue of a spiritual activity" (p. 275). Parallels to these statements could be produced by turning up the works of Bergson at random; and it is evident that he must have leant heavily on Ravaisson as he came to formulate his own position.

It is to be hoped that this volume may have the effect of re-awakening an interest in Bergson's writings as a whole. Even if the urgency of conflict between science and mysticism has somewhat abated (a result to which his own thinking has considerably contributed), and even if his lifelong wrestle with the problem it presents is not free from vacillation, he is in the succession of the masters. He asks the fundamental questions, and he looks for the answers not through a few high-flying generalizations, but by humble and yet imaginative exploration of the living tissue of accumulated facts. And in the existing state of philosophy he has two qualities which especially commend him. One is that he can write: a style like his is the index of a happier mental rhythm than is now at all usual. The other that he genuinely philosophizes, instead of spending all his time trying to state what philosophy is and then gracefully declining to practise it. If this is indeed "merely poetry", let us be numbered among the poets.

CRITICAL NOTICE.

A PREFACE TO LOGIC. By Morris R. Cohen. Routledge, London, 1946. Pp. ix + 206. Published price, 8s. 6d.

THIS book is made up of nine essays, loosely linked together by their general concern for what Professor Cohen calls "the philosophical presuppositions which give logic its meaning, and the applications which give it importance" (p. ix), to which there are appended two reviews, one of Bradley's *Principles of Logic* and the other of Dewey's *Essays in Experimental Logic*. Three of the essays have been previously published as articles; the others, to judge from their form, were each composed under some special provocation. As a not unnatural result of this manner of composition, there is considerable repetition between one essay and another (even down to the illustrative detail) and no single topic is ever hammered out in a systematic and thorough way. Yet, for all its scrappiness, this is a book well worth detailed consideration. Cohen is all the while discussing philosophical issues of the very first importance, and that is a virtue rare in contemporary writings on logic.

The ordinary logic-book, Cohen complains, is a mere hotch-potch, with contents ranging from the analysis of rhetoric to "pedagogic instructions as to the conduct of the human understanding, teaching us how to find the cause of some disease of which the cause is already known" (p. 12). The prevalence of the conceptualist doctrine that logic is "the science of thought", a view which makes it impossible to assign any distinctive field to logic, is the principal source of this incoherence (p. 3), and the same doctrine has left logic open to the criticism of writers like Schiller: that logic fails to give us the help in thinking which it promises (p. 37). But we shall be no better off if we adopt the fashionable teaching that logic is concerned with the manipulation of

symbols, for "logic could not possibly illumine thought and symbols if it did not illumine that which is the object of thought and symbolism" (p. viii).

Cohen's criticism of traditional conceptualism is forcible and to the point, but the same cannot be said of his criticism of positivism, either at this stage or, later, when he is rejecting the verifiability principle. Like so many of the critics of positivism, he will not take the preliminary trouble to examine the distinctions upon which the positivists insist. No positivist has ever denied, for example, that "whether certain combinations of words that seem intelligible by themselves do or do not have meaning is a significant enquiry, and not something always completely given by linguistic or syntactical form" (p. 50) or again that ordinary language is influenced by "purely phonetic considerations, arbitrary symbols [and] can never be completely logical" (p. 49); the real issue is whether the study of an "ideal" language throws light on the confusions which arise out of the imperfections of the ordinary historical languages. Similarly, in his discussion of the positivist's theory of truth, Cohen ignores the distinction between "truth" and "L truth". No doubt, some of his criticisms could be reformulated in a more cogent way, but as matters stand he is most of the time attacking men of straw.

Fortunately, this deficiency does not much affect Cohen's main line of argument, which takes its departure from a criticism of Idealism. He rejects the view that order and relatedness are imposed by mind on what would otherwise be unintelligible and unrelated. "If we put terms in one world and relations in another, it is difficult [impossible!] to see how the terms can have an intelligible or knowable character, and how relations in one universe can be said to be relations of terms in another" (p. 14). Relations and "order" are quite as objective as the terms they relate. "The relation of incompatibility is as hard an objective fact as the relations of subtraction, gravitation, digestion, warfare or any of the other relations that form the subject-matter of science" (p. viii). Logic, that is, is concerned neither with "rules of thought"

nor with names but with certain objective relations, which are in no sense "in the mind". "Formal logic is the heart of philosophy precisely because the subject-matter of logic is the formal aspect of all being, an aspect not only of objects and events in time and space but equally of non-spatial and non-temporal relations of objects" (p. ix).

In working out this doctrine, Cohen draws a distinction between two kinds of truth, "formal truth" and "material truth"; a distinction which is a source of recurrent difficulties in his later argument. It is, of course, the case that "we must distinguish the factual truth of any proposition and the truth of the assertion that it logically follows from, or necessitates as consequences, certain other propositions" (p. 3): this is the case, at least, if all that is meant is that "p" is a different truth (i.e. a different true proposition) from "p implies q". But it certainly does not follow that the truth of "p" is *a different kind of truth* from the truth of "p implies q", that "p" is "factually" or "materially" true whereas "p implies q" is "formally" true. The distinction we really need to make is that between truth and validity; truth being a property of propositions and validity of arguments. The assertion that an argument is valid may itself be true or false, but this does not mean that validity is a kind of truth; there are *truths about forms* but there is no *formal truth*.

It is his failure to distinguish between truth and validity which leads Cohen to suppose that there is a distinct "logic of fictions". "Since all developed sciences", he writes, "depend upon the process of comparing the consequences of rival hypotheses, it follows that correct or valid consequences can also be drawn from false hypotheses. The realm of valid logical inference is, therefore, wider than the realm of factual existence. The logic of fiction belongs to the realm of non-factual logic" (p. 83). Now, it is true that we must be able to deduce conclusions from false hypotheses in order to test them; it does not follow that these conclusions are "correct" or "valid". What is valid is *the argument by which they are derived*: in other words, if the premises had been true

propositions the conclusion would also be true—a particular sort of relation holds *as a matter of fact* between premises of a certain form and a conclusion of a certain form. There is no “realm of valid logical inferences”; there is no “non-factual logic”. What is “non-factual” (i.e. false) is not the logic but the premise (and possibly the conclusion).

Cohen further maintains that the traditional logic has been “unduly restrictive” because it “has been traditionally restricted to propositions true or false in themselves, the realm of fiction and fictions has appeared to lie beyond its ken”. This “limitation” the new logic overcomes: “Sentences which have a variable truth value, relative to a defining set of postulates or hypotheses, are as susceptible to logical analysis as any of the sentences about the mortality of Socrates that filled the older text-books” (p. ix).

It appears from this that a “fiction” is somehow neither true nor false, but has “a variable truth value”. This logical doctrine arises out of a desire to *save* fictions; Cohen devotes a considerable part of his *On the Logic of Fiction* (Chapter V) to explaining just what a valuable thing it is that men have sometimes believed fictions. Much of what he says is true and important: that metaphor and fictions have in fact played an important part in the development of science is certainly true, and that they form an *essential* element in the process of discovery it is at least plausible to maintain. But that fictions have been useful does not imply that they have a special kind of truth, a truth “relative to a defining set of postulates or hypotheses”. What this latter expression means is not at all clear: on the face of it simply that the proposition is deducible from other propositions, which can be said of any proposition, the useful and the useless, the true and the false alike, and so gives no ground for distinguishing fictions as a class of “relatively true” propositions. And if we interpret Cohen as meaning that true propositions are *deducible from it*, which is the most his historical argument could show, this still does not imply that it has a special kind of truth itself. What Cohen really wants to prove is some-

thing different again, viz., that there is a "realm" within which the fiction is true, even though it is false within the ordinary realm of space-time.

Cohen, in fact, resuscitates the doctrine of "universes of discourse", and it is instructive to examine the stages by which this doctrine gradually re-emerges. Already in the preface, Cohen is rebuking the traditional logic because it "has seemed to assume a world of hard and fast concepts, a world in which everything is black or white and where there are no gradations or twilight zones" (p. ix). In the discussion of *The Subject-Matter of Formal Logic* (Ch. 1), the "logic of non-existents" makes its first appearance and the distinction emerges between "material or existential truth" concerned with "actual or historic existence", and some other sort of truth—"non-existential"—which "liberates us from the prison-house of the actual" (p. 17). But later even "material or existential truth" slips away from under our hands. "All propositions are more or less elliptical . . . If I say 'Jones is a wise or good man' this is clearly not true without qualification. We mean wise in some things, for the most part, as human beings go, etc. The more logically conscientious we become, the more need for adding qualifications" (p. 93). And this leads to the explicit statement that "the truth of a proposition holds only in its proper universe of discourse" (p. 94).

Now it must be granted that very many propositions are elliptically expressed; we assume a certain initial preparedness on the part of our audience, a willingness to fill out allusions, and to take our assertions in a certain sense, a sense which we think the context will convey. But the proposition itself is not elliptical, and it is the proposition which is true or false. We ought not to say, for example, that "reading is necessary" is "true in a certain universe of discourse", but that as it stands it fails to raise any issue: if we interpret it as meaning "reading is necessary for the understanding of economics" then this is either true or false, not in some "universe of discourse", but in any "universe".

Of course, we could still dispute about the meaning of "understanding of economics" and go on to say something of this sort: "if you mean by 'understanding of economics' a knowledge of economic theory, what you say about reading is correct, but if you mean an ability to make predictions, then it isn't correct at all". There is, in other words, always the possibility that in what seems to us an unambiguous statement someone else will detect an ambiguity, or that what seems to be not elliptical will turn out to be elliptical. We can argue about whether a certain form of words clearly presents an issue just as we can argue about anything else; but this very possibility depends upon our taking certain forms of expression not to be elliptical. And the more general point is that there is nothing in these facts to support a theory of different "universes" of truth; to say that an expression, interpreted in one way, conveys a true proposition and, interpreted in another way, conveys a false proposition does not in the least imply that propositions are true in some universes and false in others. In fact, unless there is some single sense of truth, Cohen's discussion would convey nothing to us; whether he talks about "material truths" or "formal truths" or "non-existential truths" we discuss the truth of his assertions in the same way, viz., by considering the facts: the very distinctions he is making would be unintelligible to us if "truth" had the elliptical character he ascribes to it.

Consider his own example: "If I say 'Jones is a wise man', this is clearly not true without qualification." On the face of it, Cohen is saying *without qualification* that 'Jones is wise' is false; alternatively, and again without qualification, that what is either true or false is that 'Jones is wise in respect of X'. But that *all* propositions are true only with qualifications, he can never manage to say.

It can be granted that many "scientific fictions" are in fact elliptical expressions; or that taken literally they are false propositions (sometimes meaningless expressions) whereas if we understand them as having a particular

content they are true. But there is never a stage at which they are "relatively" or "elliptically" true.

Cohen tries to derive the metaphysics of "universes of discourse" from his criticism of "inductive logic". "The central factor in the growth of any science", he maintains, "is not the Baconian passive observation but the active questioning of nature, which is furthered by the multiplication of hypotheses as hypotheses" (p. 18). And, he argues, we can only leave room for hypotheses as "possibilities" if we accept the doctrine of "universes", just as we can only understand the function of logic as a technique for "the exploration of possibilities" if we see that it is quite non-factual in its nature.

Now certainly much of the practical usefulness of logic depends on the fact that it is a theory of propositions, not merely of true propositions; certainly, again, we must be able to discuss "possibilities" if we are to employ hypotheses. But hypotheses must have the same form as true propositions, and the possible must have actual terms. Otherwise, the testing of hypotheses would be impossible. It is the fact that there is no *special* logic of fictions that makes logic a fruitful aid to enquiry; it is the fact that false propositions have the same form and the same terms as true propositions that enables us to "question nature". Once treat the "possible" as a realm in itself and the hypothetical method is destroyed. The reality of the confirmations is spatio-temporal and if the reality of the hypothesis is of a different kind the confirmation does nothing to confirm it.

Cohen, it might be replied, is conscious of these difficulties; indeed he warns us to be "on guard against the tendency to regard the world of possibility as a mere ghost of the actual, having no position in time or space" (p. 188). But here he is talking about what he calls "concrete" possibilities; and our criticism still applies to those "bare" possibilities through which "science liberates us from the prison-house of the actual and enables us to penetrate beyond to the region of the possible" (p. 17).

There are odd features, too, in Cohen's account of "concrete" possibilities. We expect to be shown just how the possible is also actual; but, instead, it is argued that the actual is really the possible. "We cannot describe any physical object, say a particle of iron, except in terms of the processes to which it can be subjected, that is, its possibilities" (p. 184). Which would mean that we can never say that anything *is* going on in space and time but only that it *will* so go on! This is as self-defeating as the doctrine that all propositions are elliptical.

It must be admitted, however, that there is room for real difference of opinion about the precise character of Cohen's teaching. Two different tendencies struggle in his writing, one realistic in the modern sense, the other realistic in the mediaeval sense. At one time, he will insist that "abstractions are real parts, phases, or elements in things or their relations" (p. 96); at another time, he will draw a sharp distinction between "essence" (constituted by "possibilities") and "existence" (p. 184). In one chapter, he maintains that "we can show that all the fictions or constructions of science rest on a real basis to the extent that they are in any way useful as explanations" (p. 97); but in the very same chapter, and even more conspicuously elsewhere, he insists on the sharpness of the contrast between the world of fictions and the world of truth and falsity.

Perhaps we can find the source of this notable inconsistency in *Values, Norms and Science* (Ch. VIII). Once again, Cohen seeks to base a metaphysical position upon a criticism of Mill's logic. "The principal argument against the possibility of a normative science proceeds from the assumption that science can deal only with the facts of existence" (p. 159). "The essence of the fallacy is the assumption that the facts constitute the starting point of enquiry, whereas they are the ends to be achieved by enquiry. On strictly logical grounds, the fallacy is the same as the fallacy of those who believe that science can be built up by pure induction" (p. 173).

And so he argues in support of theses such as these: that the observation of facts is not a matter of mere recording, that we need hypotheses, that science is not a knowledge of mere particulars, but rather a knowledge of the way in which classes of things are related, that "the facts of physical perception are definitely influenced by our interests" [ambiguous this!], that the world of physics does not consist of isolated terms or isolated qualities (pp. 159-162). All of which goes to show that "the facts of existence" are not what Mill took them to be, but quite fails to prove that there can be such a thing as a normative science.

His final point is the crucial one; "Science is concerned with ideal standards, and determines the character of existing objects by these ideal standards" (p. 162). Not a hint, now, that fictions such as "the absolutely rigid body" and "the frictionless engine" always "rest on a real basis". The fictions must be full-blown ideals, if it is to appear that science is itself "normative". As so often before in the history of philosophy, it is the desire to "leave room for ethics" which distorts the logical structure of Cohen's argument.

Cohen goes on to make a frontal attack upon the doctrine of "positive social sciences". It is impossible, he argues, to understand history without taking account of the influence of moral beliefs; much allegedly positivistic writing introduces policies in the guise of theory; even linguistics must take account of the "purposes" served by language. But all this the positivist can quite well admit: "purposes" and "moral beliefs" are facts, and can be studied as such—but the real question is whether study can show us what we ought to do.

"Ethical systems", writes Cohen, "can be made scientific, by developing adequate hypotheses as to what is good or bad, or what is necessary to achieve certain ends. All agree that pure mathematics is a science, yet it can readily be put into the normative form. Thus to have a perfect square we must add certain quantities" (p. 173). But there is not the slightest reason for describing as "normative" propositions of the form:

"If you want X, you'll have to do Y"—such propositions simply assert positive connexions. And no number of propositions of this kind is equivalent to a "hypothesis as to what is good or bad"; we can multiply them indefinitely without ever being able to derive the conclusion that "wisdom consists in surveying our various conflicting desires with a view to the attainment of a harmony or a maximum of happiness" (*loc. cit.*).

Again and again in this chapter there are such leaps as this—along with analogies which are not analogies and an abundance of merely verbal "solutions". "Just as all our judgments of the perception of nature can be integrated by physical science into a view of the world, so may our judgments of preference be integrated with them into a view of the most desirable mode of life" (pp. 173-4). One would like to witness this mysterious "integration" of "judgments of preference" with physical laws.

Such subterfuges confirm our original impression that it is above all the need for "leaving room for ethics" which prevented the late Professor Cohen from ever working out a coherent philosophical position; that it is this "need" which drove him to attempt a compromise between naturalism and Idealism. The present review has emphasised the unstable character of Cohen's compromise. In consequence, major sections of the book have been left undiscussed; especially Cohen's theory of meaning (Ch. III), his attempt to extend the frequency theory of probability to the conception of "weight of evidence" (Ch. VI) and his criticism of "the statistical view of nature" (Ch. VII). But enough has been said, I hope, to indicate at once the strength and the fatal flaw in Cohen's general position.

J. A. PASSMORE.

REVIEWS.

A HANDBOOK OF SOCIOLOGY. William F. Ogburn and Meyer P. Nimkoff. International Library of Sociology and Social Reconstruction, Kegan Paul, Trench, Trubner & Co. Ltd., pp. xi + 644. Price: 25s.

THIS is the English edition of an American handbook, issued in this form, according to the preface, on the ground of urgent need and because it has been impossible to produce "a completely rewritten book, drawn against an exclusively British background". The urgent need is said to arise from increasing interest on the part of sociologists, students of the social sciences and the general public, and, in particular, from a desire for "a more fundamental sociological orientation" on the part of "teachers, ministers, social workers, doctors, lawyers and many others". I make no apology for labouring this point, since the judgment one makes on this lengthy work must depend, to a very great extent, on what the whole book is intended to do. Clearly, it is not one of the pieces of pioneer research of a specialised nature for which the International Library caters—the authors would be the last to claim this. Presumably, given the scope of that Library as set out on the back cover, it may be a textbook or a book of "more general educational value". Of value then, I take it, for sociologists, students of the social sciences and the professional people mentioned. So the question of the book's value depends on what is meant by "a more fundamental sociological orientation", and whether this book will help provide it. By this sort of orientation, we might legitimately mean

- (1) a more thorough knowledge of sociology, leading to more settled and correct views about it,
- (2) a more broadly based and deeply informed view of society, arising from an improved knowledge of sociology in particular and the social sciences in general.

Other possible interpretations there may well be, but these two, I think, are sufficient to cover what might reasonably be expected in the circumstances.

Let us now consider the material put before us, and then relate it to these main purposes. The general scheme is to lead in with a discussion of the main factors in the social life of man; to consider culture and human nature; and to proceed to discuss collective behaviour, communities, social institutions, and social change. This plan is explained in the first chapter, which merits close attention.

Its title is *Factors in the Social Life of Man* and it begins "This book is about man" *tout court*. "He is extraordinary in the things he can do", we are told, "if we compare his achievements with those of other species". The line, evidently, is to separate off the peculiar

achievements, and hence the capacities of man (. . . "this greater capacity to learn is inborn, the contribution of heredity to man. It cannot be contributed by group life alone, since the lower animals live in groups", etc., etc., p. 2), and to analyse out the factors operative in bringing to full fruition the greater gift of learning which man alone is supposed to possess. In fairness, I should explain that evidence bearing on this choice of approach is given. Wolfe on the *Effectiveness of Token-Reward for Chimpanzees* is cited to show that apes can do "astounding things", even though speech, writing, and the like are beyond their powers. *The Ape and the Child* is adduced as evidence of the comparatively slight effect on a chimpanzee of rearing in a human environment, so far as speech goes. That is to say, we have started with a main assertion that man is essentially and greatly different from all other creatures, and the assertion is limited and supported. Later on, there is some discussion of the social life of other living organisms; e.g., at p. 89 we are told that "Ants, for example, have a highly socialised life determined by instinct;" and at p. 14 "learning among animals" receives attention. But, on balance, the authors appear to be concentrating on a difference in astounding achievements; one does not find any discussion of or reference to the point MacIver is careful to bring out, in a perhaps less comprehensive but more crystallised study in a like field, when he defines society as a web of social relationships, specifies these relationships and reviews concisely the gradation of social development from the ant upwards, concluding "Among all higher animals at least, there is a very definite society . . . (and) there may be society . . . between animals of different species, as between a man and a horse or a man and a dog".¹ If there is a choice between approaches which (a) separate off man the extraordinary thus sharply, including references to, for example, domestication of animals in other connections, or (b) discuss human-animal relationships in so many words, the second seems to be the more unified and efficient treatment.

To return to this key chapter: we arrive, by way of some discussion of feral man, at environment as stimulus to learning; in the human case, this is "rich and varied": the "natural", or organic and inorganic environment, shared with the lower animals, is distinguished from "that part of man's total environment into which he alone is born"—which appears to be "the social heritage", "culture" or the "superorganic environment". (The question whether animals are not "born into" this environment, too, might be arguable—
anecdotal argument for animal socialisation might be permissible within the frame of reference and the method of discussion which

¹ Society: R. M. MacIver, Farrar and Rinehart, 1937, pp. 6-7.

will by now be making itself clear to the reader.) The authors then discuss the influence of the social heritage and of heredity, and the Role of the Group; and go on to make their most important sociological statement so far: ". . . our interest advances quickly from a statement of how individuals in a group co-operate and compete to the question of why some cultures have institutions, either economic or military, that are highly competitive, while other cultures seem chiefly to sponsor co-operative practices" (p. 8). In the next paragraph we come to the root of the matter. The four principal factors in the social life of man, say the authors, have now been introduced—natural environment, social heritage, heredity and the group. They are all important, they function together, their inter-relationship must be stressed. (We all agree.) They are not of equal significance, "it is of the greatest importance that the reader attempt to estimate the relative significance of these four factors for the various aspects of human experience" (p. 9). (Our support could not be more cordial.) The cultivation of a "sagacity for the significant" is vital: sagacity (this is the reviewer's gloss on the authors' statement) includes the capacity to evaluate and to select; it is therefore fair to look at the rest of the work with these criteria well to the fore.

Now the discussion of the four factors, natural environment, social heritage, heredity and the group, alternates, broadly speaking, with that of "highly important products of certain combinations of the primary forces"—personality and communities. This leads one to expect rather varying problems in handling; those of assimilation to a sociological argument of material collected in studies of other kinds, in discussing each factor; those of handling complicated analysis, in discussing products. The problems of sociology proper should arise in the final sections on Social Institutions and Social Change.

Culture, material and non-material, organised round basic human needs, gives us our social institutions; behaviour transmitted from one generation to another by learning is culture; and learning from the group, a psychological and social process, is material to the acquisition of what is transmitted. This, broadly speaking, is how the authors argue. We get the view, then, that the factors of natural environment and heredity are of less importance, and that culture is, as it were, the king pin. The treatment of biological and geographical arguments is, therefore, likely to be of particular interest. How do the authors marshal what might be called their auxiliary material? (Though, perhaps, since the four factors are all considered important in relation to whatever other factors there be, I am exaggerating when I use this term.)

Now, while we can see with a fraction of an eye that the biological-geographical material is physically compressed, as befits its

status in the authors' eyes (25 + 15 pages, roughly, excluding ecological matter), one cannot trace the integration with the main trend of the argument that one would like to see. For instance, Chap. III, "The Contribution of Biological Factors", states its aim to be that of "tracing the relation of human variability to both biological heredity and social experience". But this is obscured by the statement "Human beings differ"—with amplifications. Then we find a discussion of variability, continuous variation, the bell-shaped curve (with psychological material to make a qualification regarding environmental influences) and so on: then we go on to the causes of variability and the question of heredity and environment. Then at page 52 we have a new stage in the discussion, an enquiry as to which human traits are chiefly the result of heredity, which of environment; but there is no emphasis to speak of on the transition point, or indication of the direction the argument is taking. This is an important general weakness in the book: if a compendium of introductory information is what a handbook means, well and good—this multiplicity of topics will give the student of society a lead into many subjects on which he should be informed. But if what is wanted is an introductory manual to a branch of study with boundaries still doubtful and its very subject matter under dispute, then the borderlands should be discussed briefly, concisely, and without much illustrative detail—and the allied sciences should be discussed rather by way of showing first where they are *not* relevant to sociology and trying to work from there to the debatable land between.

Under the heading "Human Nature" there is a longish discussion of personality and how it is achieved, i.e., its relations to heredity, the group and culture. Very well, we start with the infant's natal equipment: once again there seems to be danger of over-lap: there are plenty of accessible textbooks on this subject; and one is concerned at the illustration of conditioning at the simple reflex level, with the remark "little of the behaviour of the new-born infant is reflexive, that is, fixed and definite" in a footnote (p. 86). One would be disposed to get the warning in at an earlier stage, however much emphasis on this limitation is given later, and to compress the whole treatment. Furthermore, what does one make of this by way of rounding off the discussion—"The tremendous variety of these conditioned responses in adulthood is impressive. One likes the colour yellow which brings pleasant feelings because it was worn by a childhood sweetheart. Moonlight brings out the tender sentiments. 'Drums suggest war'?"

This is not to suggest that the handling of particular topics, as handling, is uniformly unsatisfactory: on the contrary, views formerly held on instinct and Kretschmer's material on personality

are demolished as trenchantly, and with as much economy of statement, as I have seen done anywhere. Lombroso, phrenology and palmistry are sent flying all together with what I can only describe as a comprehensive side-kick. The treatment of Watson on Infants (p. 91) is a model of scientific ruthlessness. ("When the film was cut so that the responses were separated from the stimuli, a group of psychologists was not able to match them properly.") On cultural patterning of emotions, it is fair to give a wide variety of examples from cultures far removed from the reader's—and this is rightly done. But even so, one feels in places that the authors would have done more happily to cite rather than venture into allied fields. For example at p. 92 "A common classification of temperaments is four-fold: the choleric or excitable; the phlegmatic, or dull; the sanguine or happy; and the melancholic, or sad;"—common among whom? Even in every day speech not so very common, and among psychologists more a matter of historical interest than live criticism, surely? It is fair to say that the summary concluding this particular chapter is excellent, and gives the view of the wood which the student may not see for the trees in the text.

With the treatment of personality in relation to the group and to culture, we are on surer ground. It is rightly and firmly said that "the purpose of this discussion is not to provide an inventory of human nature but rather to point out something of the way social experience affects the formation of personality, it will be sufficient to deal with only a portion of the personality in process of development . . . the achievement of the self and social attitudes" (p. 107). This leads to a fair though brief analysis of imitation and a treatment of suggestion which strikes a note one would have liked to have heard long before—though "suggestion is largely a psychological phenomenon, the concept has wide applicability in sociology" (p. 110). This, at last, links up the reports of psychological work (e.g., Clark Hall and Messerschmidt) with prestige in relation to attitude change. It is such a pleasure to come upon this that one forgives the accompanying generalised sugar to the experimental pill.

"The Idea of Self" is fair common-ground for the philosopher, the psychologist and the sociologist alike. Our concern here is to see whether enough philosophy and psychology to secure a fair basis for the sociological approach is cited, and no more. Mead is rightly indicated for further reading—rightly in view of possible uses for this book—James, I feel, in view of the citation of Stanley Hall, might properly be referred to also. Otherwise, we come with a reasonable background to the heart of the matter for this purpose—the emphasis on circumstances—"What the sociologist calls 'the situation' is vital to an understanding of behaviour." With this

sociological approach, however, we would have preferred more detailed treatment of conformity and rebelliousness, especially since repression, which we might describe as less closely a matter for sociologists, is rather well handled.

Any chapter in a work of this kind headed "Personality Disorganisation" requires particular notice, though at first sight the title might seem beyond the book's proper scope. This, however, depends on the treatment. If such a chapter is merely a vehicle for a potted version of the neuroses and psychoses, and a recital of some major symptom formations, then there are plenty of textbooks of psychiatry and abnormal psychology which would do it better. If, however, the relation of the social framework to what are commonly called disorganised personalities is in question, if some attempt is being made to arrive at a positive approach to a level for segregation, then the job is worth doing. It is rightly emphasized here, though on a rather elementary level, that insanity is a matter of degree, that it may be a useful species of social microscope: the limitation of insanity to perhaps one aspect only of the total personality is rightly pointed out. For an elaboration of this statement—"It may be better for the present to attend less to cataloguing neuroses and psychoses, and more to identifying constellations of symptoms" in relation to social needs, we should be prepared to sacrifice the discussion on ætiology which follows, especially since later on we come to the question, why some societies have a great deal of mental disorder and why others have very little. The material on comparative incidence is fairly comprehensive and rightly applied—i.e., to the statement of the collective approach—and if this sort of application appeared more noticeably throughout the whole book we should be happier about it. "It is quite necessary, of course, to deal with individuals and cure them, but there is a danger in over-looking the larger causative factors. To deal with individual patients may not be the most effective answer. It might be better to attack the social situations responsible for mental disorders, such as lack of wholesome recreational opportunities and racial and religious prejudices. Sociologists are asking if society itself may not be rightly regarded as sick, when the number of maladjusted persons is so high" (p. 162).

At this point we might justly go on to the final chapter—"The Adjustment of Man and Culture"—and work back from there to a review of the authors' treatment of Social Institutions. This book is meant to have a practical bearing, when all is said and done, and it is often just when theory is brought to bear on practical problems, in a work of this kind, that deficiencies appear. The authors' views on the possible control of social change are cautious—in rather interesting contrast to their enthusiastic view of man's past achieve-

ment. From a review of the possibility of biological and geographical planning, with an emphasis on the realistic view of control, they come to the point—Can culture development be radically altered? They think it difficult to control invention, since certain non-controllable pre-requisites must be there before it can emerge, and since, where demand exists, given the technological prerequisites, it will be most difficult to prevent inventions from emerging. The most they will say is this—"The places where control is most needed are generally those that are the most susceptible to practical social engineering. These are the areas where social problems are said to exist, and vigorous efforts to solve them will often meet with success. The practical need, then, is not so much for control over the basic processes of change as it is for control over the focal points of strain which these processes produce" (p. 613). This is interesting, and may work quite well for a time if there is agreement as to what the focal points of strain are. But while it is proper for the practical planner to concentrate in this fashion, and for the statesman to try to guide social change in such a manner as to avoid collapse in the process of seeking too remote ends, the theoretician might be expected to contemplate more far-reaching changes, and might from his contemplation be at least able to assist in showing long-term implications of planning of which the practical planners may not be aware. But our authors are restrained in their views here, and we may well turn back to their treatment of social institutions.

The discussion is detailed: the organisation of society is generally treated, followed by chapters on economic institutions, governmental institutions, religious institutions and the family. Institutions appear to be regarded as important group habits, found widely and over a long period, concerned with satisfying fundamental group needs: they are distinguished from associations, which serve fewer and more specialised needs. There is nothing unusual in this: the points of interest arise when we come to the particular institutions. The review of primitive economic activity is much as we might expect—we hear of the potlatch, of primitive trading arrangements, the close integration of economic life with community activity in general. We may raise an eyebrow at the account of feudalism—rightly or wrongly it differs from many—but of the treatment of unemployment criticism is bound to be severe. The authors agree with us all in deploring unemployment, in citing as causes the business cycle, seasonal variation, inadequate labour exchange, and in stressing the difficulties of assessing technological causes. All very well, but what of a treatment which relegates mention of *Full Employment in a Free Society* to another chapter, and gives, for British readers, a facsimile of the well known unemployment graph from *Employment Policy*

without comment on that or on the White Paper? The latter may be regarded either as timorous or as a major advance in policy, but it has certainly had implications for action in this wide field. The remarks on governmental institutions, on the other hand, are such as not to provoke criticism.

Generally, then, one feels about this book that it has suffered through trying to survey an immense field, which in some aspects has simply refused to submit to organisation. Since it is so clearly intended to meet certain needs mentioned at the beginning, it has been approached throughout on that level. Any more specialised or advanced treatment would scarcely be fair. It is also right to add that much of what has been said relates to the sections where intrusion of matter from other fields of knowledge is involved. Where the authors are on sure ground their treatment can be more satisfying (e.g., on Status). However, if this book is put before discussion groups in Sociology, there is certainly the danger that they will find themselves discussing not sociology but psychology, demography, economics, or geography, according to the stage they have got to in their reading. For groups this can presumably be corrected by a tutor who is himself a sociologist, but for the solitary beginning student one is more deeply concerned.

J. A. CAEDNO.

A HISTORY OF AMERICAN PHILOSOPHY. By H. W. Schneider. Columbia University Press, New York, 1946. Pp. 646. Price \$4.50.
 AMERICAN PHILOSOPHICAL ADDRESSES, 1700-1900. Edited by J. L. Blau. Columbia University Press, New York, 1946. Pp. 762.

THESE two books, which are meant to be read in conjunction with one another, form part of the Columbia Studies in American Culture. They are indispensable to the serious student of American ideas, although neither is particularly rewarding to the philosopher as such.

Schneider's *History* is a model of its kind. The major trends in American thinking up to 1900 are clearly distinguished and described; the illustrative material is copious; the critical bibliographies are at once selective and sufficient; there is an excellent index, and both print and binding are the Columbia Press at its best. Philosophy is linked with political and scientific developments in a way not at all mechanical but genuinely instructive. Further, the style is clear and forcible, never descending into that intricate German-American pattern which so befuddles and bemuses the British reader. Comparable formal virtues, except on the point of style, are exhibited by Blau's selection of *Philosophical Addresses*.

If neither book is at all exciting, that is not the fault of Schneider and Blau but of American philosophy. Schneider himself expresses

the hope that "some of the episodes which I have laboriously exhumed for the purposes of this narrative may never suffer further revivification" (p. ix), and that hope his readers will certainly share. He remarks also, what is only too obvious from the story he tells, that "we still live intellectually on the fringe of European culture" (p. viii); and it can be added that it is third-rate European thinkers who most extensively influenced American philosophy—particularly third-rate Scots. "What made Scottish common-sense so 'vermiculate' was the use of philosophical reason as a moral sedative, which was administered in excessive doses by the clergy in the hope that it would be an antidote to the powerful stimulants of the experimental sciences" (p. 247). Of course, it was not Hume, it was not even (primarily) Reid and Hutcheson who were thus invoked, but McCosh, Ferguson and Kames had an immense American reputation: McCosh naturally the greatest of all, after his move to Princeton.

It was in fact the peculiar function of philosophy in American thought to provide an "answer" to home-spun radical naturalism. Inevitably, then, philosophy consisted far more of personal exhortation than of serious argument. That is why Blau's *Philosophical Addresses*, a collection of sermons and occasional addresses, is not quite so odd a companion-volume to a serious *History* as it at first appears. But the ordinary reader is likely to find Blau's title somewhat misleading, for there is not one of these addresses which need be taken seriously as philosophy, and most of the writers are not philosophers at all, in any but the vulgar sense of the word in which it is enough to "have views" to be accounted a philosopher. Here are the American analogues not only to our Quaife and our Syme, but even to our Wentworth, our Collins, our Stephensen. This same broad interpretation, Schneider also accepts: Hawthorne, Melville, Whitman are all considered at length in his hospitable pages. On the more academic interpretation of "philosophy", indeed, the earlier chapters of Schneider's book would provide the material for nothing larger than a pamphlet. But as a contribution to "a series bringing together scholarly treatments of those aspects of American culture that are usually neglected in political histories" each book admirably fulfils its purpose.

J. A. PASSMORE.

PSYCHOLOGY, THE FUNDAMENTALS OF HUMAN ADJUSTMENT. N. L. Munn, Houghton Mifflin Company, Boston, 1946. 497 pages.

A TEACHER's estimate of a textbook will be made largely on the basis of how he intends it to be used in relation to his own teaching. The teacher who is looking for a text in psychology for first year students that can be studied in loose conjunction with a course of

lectures, demonstrations and discussions, should think highly of Munn's *Psychology*. It possesses the main features he would want. First, it covers at some length all those topics usually included in an introductory course—the scope and method of psychology, development (including the usual neurological material), learning, remembering and thinking, motivation, feeling and emotion, perception and sensation, individual differences and personality, treated in that order. Second, its material is as up-to-date as a textbook can be expected to be, reflecting both current interests in research and the data yielded by it on the issues treated. Third, it is lucid both through its text and through the extensively used illustrations and diagrams. Fourth, by separating the sources of work referred to and books for further general reading, it provides a good stepping off point for the student wanting to do further work either generally or specifically on matters treated. Finally, it is an interesting book to read and a pleasing one to look at.

Munn has obviously gone to great pains to make the book an efficient teaching instrument. Each of his main sections begins with a brief survey of the issues to be treated; each chapter begins with a simpler survey of its special part in that broader area and ends with a summary of what has been said in it, and all of this is aided by the illustrations and references mentioned before.

The general tone of the book is empirical and experimental, Munn being concerned to tell the student in broad terms how particular data were obtained as well as what the data were. On the very general issues in the subject, Munn adopts a moderate position, or tries to, with a number of questionable results. Three of these will be commented on briefly. He adopts the easy way out of the issue, not now so burning, between the objectivists and the mentalists in defining the subject-matter of psychology. With Woodworth, Thouless and a number of others, he suggests that both parties to the dispute were right: psychology is the science of inner or subjective experience and it is also the science of overt behaviour or effector response. To leave the matter there, however, is not enough; unless there are two sciences, as Hunter earlier suggested, some relationship must be shown between these two fields; if there are two, then it would be better to recognise that and at this stage treat them separately. Again, Munn does not take the radical position of rejecting introspection; yet not a single introspective study that I can recall is referred to on any of the problems discussed, nor does he indicate in any specific case how introspection could throw light on the problems of psychology, although, of course, there are numerous opportunities for doing so. Finally, Munn wishes to avoid the problem that divided the machine-theorists and the purposivists. He seems to line up with the former by stating that all behaviour is a response to a stimulus, but makes

a serious implicit concession to the latter by hastening to add that not all stimuli are events operating upon receptors—some neural impulses start up centrally. Even if it is considered unduly confusing for the beginner to have these issues argued out, there is no justification for pretending to him that they are not issues at all. L. E. Cole, in his *General Psychology*, has done better than this. He warns the student that he has a behaviourist bias, and yet gives a clearer account of introspective methods and the purposivist position than does Munn, who apparently rejects neither of these.

It is difficult to vouch for the detailed accuracy of a general textbook on matters of fact, but in two chapters scrutinised closely in a search for inaccuracy singularly few errors were discovered.

As a general estimate, I consider Munn's book one of the best textbooks of its kind at present available.

W. M. O'NEIL.

BOOKS RECEIVED.

(Mention in this list neither precludes nor guarantees later review.)

BETWEEN MAN AND MAN. By Martin Buber, translated Ronald Gregor Smith (Kegan Paul, 1947. 210 pp.). Price (U.K.), 12/6.

A collection of essays, developing views stated in *I and Thou* (1923).

OUR INNER CONFLICT—A CONSTRUCTIVE THEORY OF NEUROSIS. By Karen Horney, M.D. (Kegan Paul, 1946. 250 pp.). Price (U.K.), 10/6.

The author develops a theory that the dynamic centre of neurosis lies in a basic conflict between the attitudes of "moving toward", "moving against", and "moving away from" people. The work is intended for psychoanalysts and "all who want to know themselves".

MAMRE. ESSAYS IN RELIGION. By Martin Buber, translated Greta Hort (Melbourne University Press, 1946. 190 pp.). Price, 12/6. Essays on Chassidism.

SOCIOLOGY OF LAW. By Georges Gurvitch, with a preface by Roscoe Pound (Kegan Paul, 1947. 248 pp.). Price (U.K.), 18/-.

Partly a historical survey of earlier theories of the sociology of law, partly an attempt to define this subject and indicate its main branches.

THE COMFORTS OF UNREASON—A STUDY OF THE MOTIVES BEHIND IRRATIONAL THOUGHT. By Rupert Crawshaw-Williams (Kegan Paul, 1947. 206 pp.). Price (U.K.), 12/6.

This work is intended for the non-specialist reader, and claims to deal with the "why", not the "how", of irrational thinking.

THE ANATOMY OF LANGO RELIGION AND GROUPS. By T. T. S. Hayley (C.U.P., 1947. 207 pp., with illustrations and map). Price (U.K.), 21/-.

A dissection of the structure of Lango (Uganda) society into its constituent groups with a study of the forces keeping each group in existence.

DIMENSIONS OF PERSONALITY. By H. G. Eysenck, Ph.D. (Kegan Paul, 1947. 308 pp.). Price (U.K.), 25/-.

An effort to discover the main dimensions of personality and to define them operationally by means of strict experimental, quantitative procedures.

PSYCHOLOGY IN EDUCATION. By Herbert Sorenson (McGraw-Hill, 1940. xiv + 489 pp.).

The author's objective was "to produce a volume that would contain and interpret the fundamental psychological facts, principles, and theories applying to education".

BOOKS FROM EUROPE.

By HENRI FRANÇOIS TECOZ.¹

DEUCALION: Cahiers de philosophie. Paris, Editions de la revue Fontaine. No. 1, 1946.

To appear three times a year, under the direction of Jean Wahl. The first number (of 270 pages) is almost entirely devoted to studies in the existentialism of Sartre and its origins.

FILOSOFIA Y VIDA. By J. R. Gironella. Barcelona, Ed. Barna, 1945.

Four studies, on Nietzsche, y Gasset, Croce and Unamuno. A somewhat commonplace Jesuit interpretation.

DIE PHILOSOPHIE HEGELS ALS KONTEMPLATIVE GOTTESLEHRE. By Iwan Ilijin. Berne, A. Francke, 1946. Bound, pp. 432.

A fundamental, very detailed, work by the former Moscow University professor.

SIGNE ET SYMBOLE. By J. Delanglade, H. Schmalenbach, P. Godet and J. Leuba. Neuchâtel, La Baconnière, 1946. Sewn, paper cover, pp. 179.

Sets out to state precisely certain present-day problems in the field of symbolism: the meaning of the word, the phenomenology of the sign, their place in art and theology.

¹ Selected and translated by the Editor.

LA PHILOSOPHIE, GARDIENNE DE LA CITÉ. By E. Krakowski. Paris, Editions du Myrte, 1946. Sewn, paper cover, pp. 291.

Concerned with the social role of philosophy. A collection of remarkable studies, especially those on Plotinus and Péguy. The author is a Bergsonian, but is sympathetically inclined towards Christian personalism.

LA VALEUR DE LA SCIENCE. By Henri Poincaré. Genève, A l'enseigne du cheval ailé, 1946. Pp. 299.

An elaborate reprint, with a preface by Louis Rougier, criticising scientific nominalism.

DIX SIÈCLES DE PHILOSOPHIE. By Georges Ambroise. Paris, Ed. de Flore, 1946. Sewn, paper cover, pp. 144.

A clearly written account of the essential features in the philosophical development of the last six centuries, and of the values which are at stake in present-day controversies.

KANT ET LE PROBLÈME DU TEMPS. Jacques Havet. Paris, Gallimard, 1947.

Sets out to show that Kant is not a formalist, even if he sometimes lays himself open to this accusation. If, in the manner of certain modern French commentators, consciousness is regarded as an act, at grips with the reality to which it strives to give form, it is itself temporal. Its time is no longer a medium into which it is plunged as something inert, but a time which it creates in its origina-tive activity, and the time of phenomena, the passive medium, is derived from this active time.

ÉTUDES SPINOZISTES. By André Darbon. Paris, Presses Universitaires, 1947.

A lucid commentary on Spinoza's *Treatise on the Correction of the Understanding*. Argues particularly that the third part of the treatise cannot differ basically from the first part of the *Ethics*, a hypothesis which throws light on the intimate agreement between Spinoza's method and its application.

AROUND THE JOURNALS.

THERE are two recent attempts to clarify the status of "counter-factual conditionals" (R. M. Chisholm: *Mind*, October, 1946; N. Goodman: *Journal of Philosophy*, February 27, 1947). Both authors canvass a number of possibilities, without being able to reach any conclusion which quite satisfies them; the problem how we can talk about the consequences of what might have but doesn't in fact happen remains unsettled.—Leibniz's 300th anniversary has not passed un-

noticed. The *Revue Philosophique* for October, 1946, is a special Leibniz number, and there are articles on Leibniz in *Philosophy* (November, 1946) where P. Schrecker contrasts the political implications of Leibnizian and Cartesian thought and in the *Philosophical Review* (May, 1946), which contains an analysis by L. E. Loemker of Leibniz's theory of ideas—John Dewey and A. F. Bentley collaborate in a series of articles in the *Journal of Philosophy*; the first two (September 12 and September 26, 1946) develop a transactionalist as opposed to a substantialist theory of things, with special reference to physics and physiology, the third (November 21) describes the processes by which transactions are named, the fourth (May 27, 1947) is a detailed and vigorous criticism of contemporary theories of definition — Russell's *History* is reviewed at length by I. Berlin (*Mind*, April, 1947) and very severely by S. Ratner (*Journal Phil.*, January 16); in the *Philosophical Review* (January, 1947) G. Bergmann argues, against Russell's recent views, that a sense-data analysis which refers only to universals is impossible, and that even if it were possible it would not solve the problems Russell hopes to solve — Scholarly articles of importance are E. C. Mossner's demonstration that Hume's *Treatise* received more notice on the Continent than is usually supposed (*Mind*, November, 1946); H. F. Hallett's defence of Dr. Johnson's refutation of Berkeley (April, 1947); a controversy between A. Lovejoy and H. Veatch on the scholastic doctrine of divine freedom in creation (*Phil. and Phenom. Res.*, September, 1946); R. C. Lodge on the place of progress in Plato's political philosophy (*Phil. Review*, September, 1946); A. H. Chroust on the meaning of "philosophy" in ancient Greece (*Phil. Review*, January, 1947); G. E. Smock's account of Locke's influence on "Augustan literature" (*Phil. Review*, May, 1946); R. E. Lacombe on the cogency of Pascal's wager (*Rev. Philosophique*, March, 1947) — It is still being debated whether "we can know for certain" that "material objects exist"; A. H. Basson (*Mind*, October, 1946) thinks that we can only doubt whether certain material objects exist because we already know that others in fact exist; W. T. Stace attacks the doctrine that empirical propositions are "merely hypotheses" (*Journal Phil.*, May 27, 1947); C. D. Broad analyses at great length Marc-Wogau's theory of sense-data (*Mind*, October, 1946, April, 1947) — Of special interest to logicians is E. J. Nelson's argument (*Mind*, October, 1946) that unless we distinguish between what a proposition asserts and what it presupposes we cannot give a satisfactory account of the possibility of contradicting a singular proposition; in reply A. Pap (April, 1947) accuses Nelson of employing "pseudo-object sentences" — Logical positivism comes under attack by R. W. Sellars (*Phil. and Phenom. Res.*, September, 1946) for failing to take account of Anglo-American realism; Y. Bar-Hillel maintains that the direct approach to the

analysis of ordinary languages (in Moore's manner) must prove unfruitful, the mediation of an artificial language, of the type constructed by Carnap, being essential (*Mind*, October, 1946); Carnap carries further his theory of "degree of confirmation" (*Journal Phil.*, March 13, 1947) — Aesthetics is discussed in a considerable number of articles, perhaps with most point in R. Bayer's defence of a "realist aesthetics" (*Rev. Philosophique*, January, 1947) and B. Morris's appraisal of the various "philosophies of criticism" (*Phil. Review*, May, 1946) — In the same number J. Somerville describes recent trends in Soviet philosophy, and in January, 1947, A. Lalande analyses current trends in French philosophy, as also does G. Berger (*Phil. and Phenom. Res.*, September, 1946) — That Journal contains two symposia of general interest; the first a discussion (by R. Demos, S. Hook and others) of the Harvard Report on a Liberal Education (December, 1946; April, 1947); the second (April, 1947) on the relation between psychology and phenomenology.

NOTES AND NEWS.

AUSTRALASIAN ASSOCIATION OF PSYCHOLOGY AND PHILOSOPHY.

NEWCASTLE LOCAL BRANCH.

The Branch has been holding regular weekly meetings to discuss the general problem of "The Morality of the Educated, in so far as they are Educated". Mr. W. H. C. Eddy has presented Part I of a paper on "Politics and Education", and this has been the basis of several weeks' discussion: Part II will be presented shortly. On June 6 a symposium was held on "Modern Problems and Morality" at which the speakers were the Rev. Dr. F. Ryan and Mr. W. H. C. Eddy; between fifty and sixty people were present and the papers aroused keen discussion. The Branch is also arranging, in conjunction with the W.E.A., a series of four public lectures to be held in July, under the general title of "Man and Morals".

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ANNUAL GENERAL MEETING.

The Annual General Meeting of the Australasian Association of Psychology and Philosophy will be held in the Philosophy Room, Sydney University, at 7.30 p.m. on Thursday, September 4, 1947.